CLEAN AIR COUNCIL

ENVIRONMENTAL INTEGRITY PROJECT

PennFuture

PennEnvironment RESEARCH & POLICY CENTER

Allegheny County Health Department

Proposed Title V Operating Permit &
Federally Enforceable State Operating Permit
ACHD Permit #: 0052-OP22

United States Steel Corporation
Mon Valley Works – Clairton Plant
400 State Street
Clairton, PA 15025-1004

March 15, 2022

Written Comments by Clean Air Council,
Environmental Integrity Project,
Citizens for Pennsylvania's Future, and
PennEnvironment Research & Policy Center

Via email: *aqpermits@alleghenycounty.us*

Clean Air Council ("the Council"), Environmental Integrity Project ("EIP"), Citizens for Pennsylvania's Future ("PennFuture"), and PennEnvironment Research & Policy Center (collectively, "Commenters") appreciates the opportunity to submit these comments regarding a draft Title V permit for the Clairton Coke Works ("Draft Permit"), prepared by the Allegheny County Health Department ("the Department").

The Council is a non-profit environmental health organization headquartered at 135 South 19th Street, Suite 300, Philadelphia, Pennsylvania, 19103. The Council maintains an office in Pittsburgh. The Council has been working to protect everyone's right to a clean

environment for over 50 years. The Council has members throughout the Commonwealth who support its mission, including members in Allegheny County.

The Environmental Integrity Project ("EIP") is a national nonprofit organization headquartered at 1000 Vermont Avenue NW, Suite 1100, Washington, D.C. 20005, and with staff in Pittsburgh and Philadelphia. EIP is dedicated to advocating for more effective environmental laws and better enforcement. EIP has three goals: (1) to provide objective analyses of how the failure to enforce or implement environmental laws increases pollution and affects public health; (2) to hold federal and state agencies, as well as individual corporations, accountable for failing to enforce or comply with environmental laws; and (3) to help local communities obtain the protection of environmental laws.

PennFuture is a Pennsylvania-statewide environmental organization dedicated to leading the transition to a clean energy economy in Pennsylvania and beyond. PennFuture strives to protect our air, water and land, and to empower citizens to build sustainable communities for future generations. A main focus of PennFuture's work is to improve and protect air quality across Pennsylvania through public outreach and education, advocacy, and litigation.

PennEnvironment Research & Policy Center is dedicated to protecting our air, water and open spaces. PennEnvironment works to protect the places we love, advance the environmental values Pennsylvanians share, and win real results for our environment. For more information, visit www.pennenvironmencenter.org.

In January 2022 the Department published notice of a proposed Title V permit, establishing a 45-day public comment period ending at the end of the day on Monday, February 28, 2022. Some relevant documents are located here:

1. Title V Operating Permit,
2. TVOP Review Memo, and
3. TVOP Application.

See Public Comment Notices, https://www.alleghenycounty.us/Health-Department/Programs/Air-Quality/Public-Comment-Notices.aspx.

These written comments are in addition to any verbal comments presented by the Commenters at the public hearing on Tuesday, February 22, 2022, at 6 pm.

Index to Comments

1. The Department should revise its approach to public participation for Title V permits by adopting more generous comment periods and posting all relevant documents in advance, to avoid problems similar to those experienced with respect to the Draft Permit.

2. The applicant has not properly submitted a complete application or properly supplemented it.

    a. The application was not complete even at the time of its submission in 2016, relying on outdated emissions data from old stack tests.

    b. Emission-related information in the 2016 application does not reflect any attempted repairs to air pollution control equipment following a catastrophic fire in December 2018.

    c. Unit level air emissions limits set forth in the 2016 application and the proposed renewal are absurd.

3. The Department should require the applicant to prepare a compliance plan to address regular noncompliance with the Clean Air Act and include a schedule of compliance as part of the permit.

4. The Draft Permit fails to incorporate all applicable requirements and should be revised to expressly incorporate the applicable requirement that U.S. Steel is prohibited from releasing benzene, coke oven emissions, or other air pollutants except as explicitly permitted.

5. The Department should require a compliance plan and compliance schedule to address U.S. Steel's unaddressed, ongoing noncompliance with the breakdown reporting requirements of Article XXI.

6. The Department should revise the Draft Permit to include provisions requiring "hot idle" in the event of noncompliance with the law.

7. The Department should correct the removal of hourly emissions limitations for sulfur dioxide (present in the 2012 permit) and make them more stringent, as appropriate.

8. The Department should revise the Draft Permit to include additional provisions to reduce the exposure of the community to harmful emissions from the facility.

    a. The Department should require the applicant to explore opportunities for using something other than a highly toxic gas (coke oven gas) as a "control device" and blanketing agent in flat-roofed tanks.

b. The Department should explain why SO2 emissions are increasing despite the installation of control technology for the Vacuum Carbonate Unit upgrade.

c. COG emission factors for certain HAPs were incorrectly based on the MSDS weight % for COG.

d. The Department should correct a typo in the Title V emission limit for coal tar loading and not use rounding in performing subtotals, which can throw off calculations.

e. The Department should require fenceline monitoring for benzene and hydrogen sulfide emissions.

9. The Department Should Revise the Proposed Regulations to Require a Meaningful Work Practice Plan to Facilitate Emissions Reductions at the Clairton Coke Works.

   a. While the federal regulations set forth requirements for the preparation of a work practice plan in 1993, there are limitations in those regulations that could be cured by the Department in the Draft Permit.

   b. For door areas, the work practices plan does not specify standards or criteria for repair or replacement, or for corrective action.

   c. For charging, the work practices plan does not specify standards or criteria for repair or replacement, or for corrective action.

   d. For topside lids, the work practices plan does not specify standards or criteria for repair or replacement, or for corrective action.

   e. For offtakes, the work practices plan does not specify standards or criteria for repair or replacement, or for corrective action.

   f. The Department has the ability to gather information for establishing standards that would facilitate repair and replacement of equipment that tends to frequently violate applicable standards.

10. Any revised application should reflect the upcoming retirement of batteries 1, 2, and 3, promised to take place in early 2023.

11. It is not improper to include in the proposed Title V permit new emissions limitations that are more stringent than "applicable requirements," contrary to the assertions of the applicant.

12. The Department should revise the Draft Permit to require more frequent monitoring and testing to assure compliance with multiple emission limits.

a. The Draft Permit does not include sufficient monitoring and testing requirements for multiple PM emission limitations for the boilers, and the Draft Permit should be revised to require PM CEMS.

b. The Draft Permit does not include sufficient monitoring and testing requirements for CO emission limitations for coke oven battery combustion stacks and boilers should be revised, and the Draft Permit should be revised to require CO CEMS.

c. The Draft Permit does not include sufficient monitoring and testing requirements for VOC emission limitations for coke oven battery combustion stacks and boilers, and the Draft Permit should be revised to require VOC CEMS.

d. The Draft Permit does not include sufficient monitoring and testing requirements for hourly and annual NOx emission limitations for several coke oven battery combustion stacks and boilers, and the Draft Permit should be revised to require NOx CEMS.

e. The Draft Permit does not include sufficient monitoring and testing requirements to ensure the coke oven battery flares meet all applicable requirements.

f. The Draft Permit does not include sufficient monitoring and testing requirements for hourly and annual benzene, hydrochloric acid, and naphthalene emission limitations for the Coke Oven C Battery combustion stack or hourly and annual benzene, hexane, hydrochloric acid, ammonia, and hydrogen sulfide emission limitations for Coke Battery No. 20 combustion stack.

g. The Draft Permit does not include sufficient monitoring and testing requirements for hourly and annual ammonia, hexane, and hydrochloric acid for the boilers.

h. The Draft Permit does not include sufficient monitoring or testing requirements to ensure the ammonia flare complies with multiple emission limitations, achieves a minimum destruction efficiency of 98%, or meets other applicable permit restrictions.

i. The Draft Permit does not include sufficient monitoring and testing requirements for SO2 emission limitations for boilers and coke oven battery combustion stacks during periods of monitor malfunction, breakdowns, and repairs.

j. The Draft Permit does not include sufficient monitoring or testing requirements to assure compliance with emissions limits at the Desulfurization Plant

k. The Draft Permit does not include sufficient monitoring or testing requirements to assure compliance with emissions limits for VOC, methanol, benzene, HCl, H2S, phenol, or ammonia at the Coke By-Product Plant.

l. The Draft Permit does not include sufficient monitoring or testing requirements to assure compliance with emissions limits for PM, SO2, NOx, or VOCs for the Quench Towers.

m. The Draft Permit does not include sufficient monitoring or testing requirements to assure compliance with emissions limits for emissions from the Pushing Emission Control Systems.

Table of Attachments

Attachment 1	2012 Title V Permit
Attachment 2	PA Department of Environmental Protection, Air Emissions Report for Clairton Coke Works (2017) (self-reported data)
Attachment 3	PA Department of Environmental Protection, Air Emissions Report for Clairton Coke Works (2018) (self-reported data)
Attachment 4	PA Department of Environmental Protection, Air Emissions Report for Edgar Thomson Plant (2017) (self-reported data)
Attachment 5	PA Department of Environmental Protection, Air Emissions Report for Edgar Thomson Plant (2018) (self-reported data)
Attachment 6	PA Department of Environmental Protection, Air Emissions Report for Irvin Works (2017) (self-reported data)
Attachment 7	PA Department of Environmental Protection, Air Emissions Report for Irvin Works (2018) (self-reported data)
Attachment 8	Allegheny County Surface Temperature Inversion Analysis - 2019, Anthony J. Sadar, CCM, Air Pollution Administrator II (March 9, 2020) (Rev. 4/8/20), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/AnnualSfcTempInversionAnalysis-2019.pdf
Attachment 9	August 7, 2014 consent order and agreement ($300,000.00)
Attachment 10 Attachment 11	March 24, 2016 (complaint and consent judgment (Memorializing $3,948,000 in civil penalties since 2008 and assessing an additional penalty of $25,000.00)
Attachment 12	Enforcement Order # 180601 (June 28, 2018) (seeking $1,091,950),
Attachment 13	Administrative Order, Violation No. 181002 Revised (October 31, 2018) (seeking $613,716), https://pacokeovens.org/wp-content/uploads/2019/06/2018-10-31-Administrative-Order-181002-Revised.pdf
Attachment 14	Enforcement Order # 190305 (March 29, 2019) (seeking $707,568), https://pacokeovens.org/wp-content/uploads/2019/06/2019-04-25-Notice-of-Appeal-190305.pdf (attached to notice of appeal)
Attachment 15	Enforcement Order, Violation No. 190501 (May 10, 2019) (seeking $337,670), https://pacokeovens.org/wp-content/uploads/2019/06/2019-05-

	10-Enforcement-Order-190501.pdf
Attachment 16	Enforcement Order, Violation No. 191201 (December 20, 2019) (seeking $10,560), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/12202019-USS-Clairton-191201.pdf
Attachment 17	Demand for Stipulated Penalties under Settlement Agreement and Order #190604 (January 14, 2020) (seeking $743,625), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/2020-01-14-USSteel-Clairton.pdf
Attachment 18	Enforcement Order, Violation No. 200202 (February 21, 2020) (seeking $13,200), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/2020-02-21-USSteel-Clairton.pdf
Attachment 19	Demand for Stipulated Penalties under Settlement Agreement and Order #190604 (May 28, 2020) (seeking $361,400), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/USSteel-Stipulated-Penalty-Demand-Letter-Q4-2019-Q1-2020.pdf
Attachment 20	Enforcement Order, Violation No. 210101 (January 25, 2021) (seeking $8,800), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/Clairton%201.25.21.pdf
Attachment 21	Enforcement Order, Violation No. 210201 (February 19, 2021) (seeking $4,165), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/Clairton%202.19.2021.pdf
Attachment 22	Demand for Stipulated Penalties under Settlement Agreement and Order #190604 (March 12, 2021) (seeking $383,450), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/2_3_4Q%202020%20Demand%20Letter.pdf
Attachment 23	Notice of Violation #210302 (April 1, 2021) (seeking unspecified damages), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/USS%20Clairton%20NOV%20H2S.pdf

Attachment 24	Demand for Stipulated Penalties under Settlement Agreement and Order #190604 (June 4, 2021) (seeking $201,500), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/USSteel-0052c2021-06-04ref190604-stipulated-penalties.pdf
Attachment 25	Enforcement Order, Violation No. 210801 (August 27, 2021) (seeking $5,500), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/USSteel-Clairton-Enforcement-Ltr-0052ord2021-08-27ref210801.pdf
Attachment 26	Enforcement Order, Violation No. 211207 (December 15, 2021), (seeking $5,500), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/USS%20Clairton%20C-21%20standpipe%20EO.pdf
Attachment 27	Demand for Stipulated Penalties Under Settlement Agreement and Order #190604 (March 2, 2022) (seeking $859,300), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Demand%20Letter%202,3,4%20Q%202021.pdf
Attachment 28	Enforcement Order, Violation No. 220302 (March 7, 2022) (seeking $1,842,530), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement%20Order%20220302%20USS%20-%20H2S.pdf
Attachment 29	First extension request dated February 2, 2022 and denial letter dated February 10, 2022
Attachment 30	Email from Allegheny Open Records (Thu, Feb 10, 2022 at 207 PM)
Attachment 31	Email from Allegheny County Health Department (Thu, Feb 10, 2022 at 123 PM)
Attachment 32	Email from Allegheny County Health Department (Thu, Feb 10, 2022 at 442 PM)
Attachment 33	Second extension request dated February 11, 2022 and partial approval letter dated February 15, 2022
Attachment 34	U.S. EPA, White Paper for Streamlined Development of Part 70 Permit Applications (July 10, 1995)

Attachment 35	2016 Application, Attachment K (Supporting Calculations) (Excerpts), pdf pages 554, 560, 562, and 569
Attachment 36	2016 Application, Attachment G, pdf pages 480-506
Attachment 37	Application, Application Form, Section 7, pdf page 12 of 1052 and Section 9, pdf page 13 of 1052
Attachment 38	Application, Attachment H (Air Pollution Control Act Compliance Review Form), pdf pages 516-518 of 1052
Attachment 39	Application, Attachment P (2015 Annual Compliance Certification), pdf pages 967-1052
Attachment 40	PennFuture, Notice of Intent to Sue dated January 28, 2016
Attachment 41	Brief of Appellee U.S. Steel in *Clean Air Council v. U.S. Steel,* 4 F.4th 204 (3d Cir. 2021), at 22
Attachment 42	Excerpts of pages cited by U.S. Steel for its assertion that it reported to ACHD as required by Article XXI
Attachment 43	2016 Application, pdf pages 563, 568 (references to MSDS for Coke Oven Gas)
Attachment 44	United States Steel Corporation, Raw Coke Oven Gas Safety Data Sheet (SDS), rev. 12/20, https://www.ussteel.com/documents/40705/43680/Raw+Coke+Oven+Gas+SDS.pdf/6bd86dd1-c7b9-9e57-3c1b-c67d870bf0d3?t=1612459967401)
Attachment 45	Clairton IP 0052-I015 Technical Support Document, March 1, 2017, page 9
Attachment 46	Clairton IP 0052-I015, March 1, 2017, page 33
Attachment 47	U.S. Steel, NESHAPS Work Practices Plan, dated November 12, 1993 (for batteries 1, 2, 3, 7, 8, 9, 13, 14, 15, 19, and 20), NESHAPS Work Practices Plan, dated November 12, 1993 (battery B)
Attachment 48	"An Open Letter to our Pittsburgh Family" from U.S. Steel, posted April 30, 2021, https://twitter.com/U_S_Steel/status/1388116103151357954
Attachment 49	Applicant's Preliminary Comments, January 7, 2022
Attachment 50	Email string between applicant and the Department, January-February 2022
Attachment 51	Excel spreadsheet of emissions factors in 2016 application.

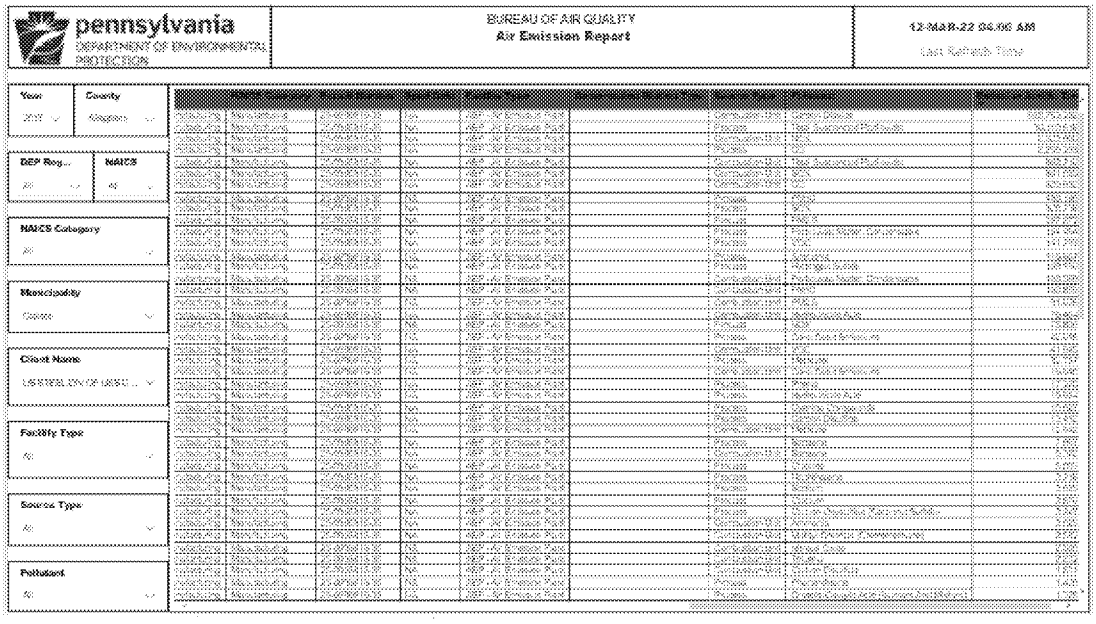
Background

The comments relate to a Draft Permit dated January 13, 2022. This a proposed revision of a permit issued in 2012. *See* Attachment 1 – Previous Permit dated March 27, 2012 (2012 Permit").

The Clairton Coke Works has a long, sordid history of dangerous pollution emissions, rampant noncompliance with air pollution requirements, and failure to protect health and the environment from potential harm from its operations.

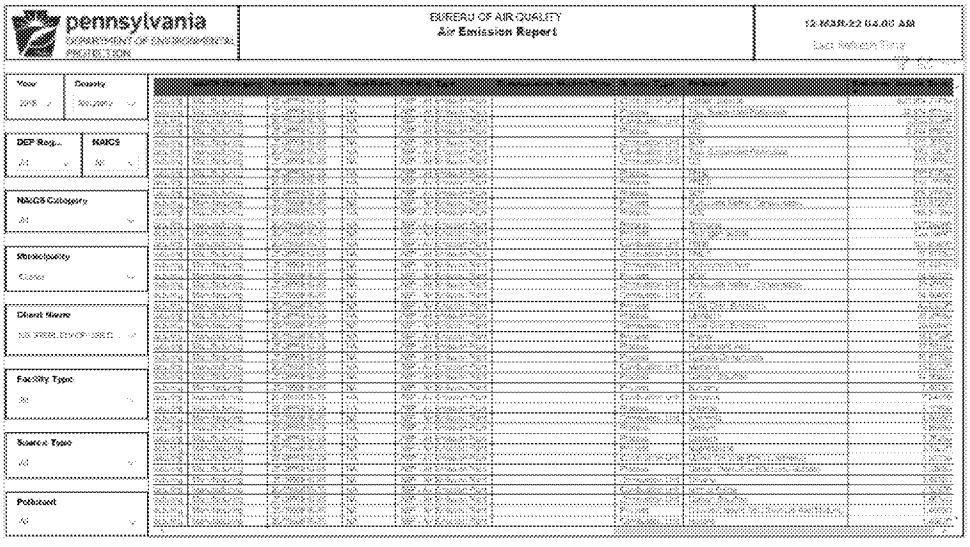
This is the largest by-products coke plant in North America. Draft Permit at 5. For fine particulates, the Department proposes an annual emissions limit of 1,085.52 tons per year. The entire county is legally designated as a nonattainment area for fine particulates, and the monitor on top of a high school just a few miles from the facility has historically shown nonattainment.

The following table of self-reported data in 2017 shows tremendous amounts of emissions from the Clairton Coke Works:



See Attachment 2 – Pennsylvania Department of Environmental Protection, Air Emissions Report for Clairton Coke Works (2017).

During the following year the Clairton Coke Works continued to be a big polluter, as demonstrated by the following table of self-reported data in 2018:



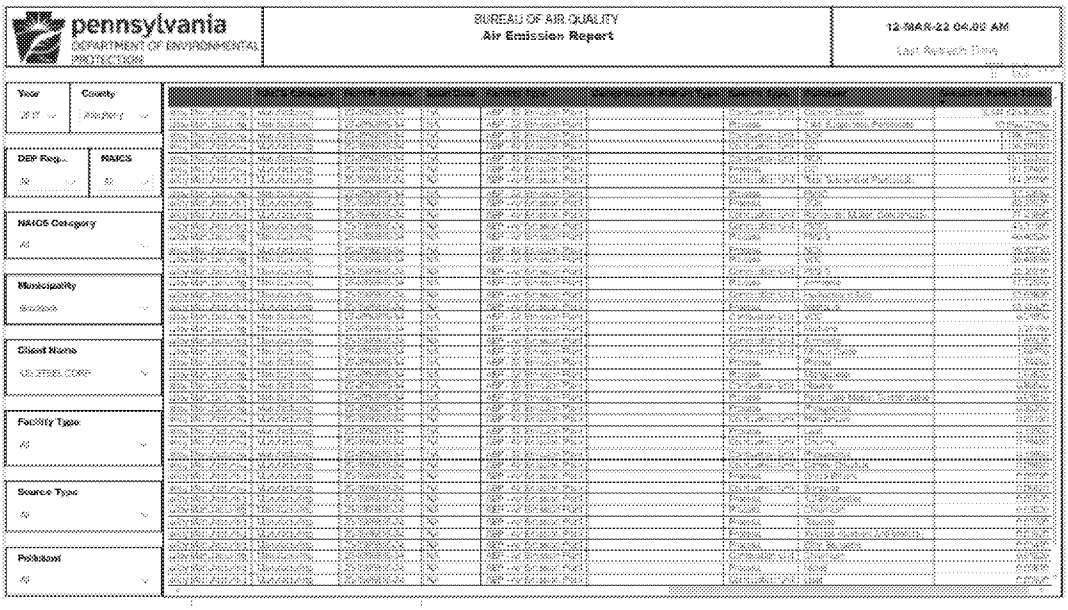
See Attachment 3 – Pennsylvania Department of Environmental Protection, Air Emissions Report for Clairton Coke Works (2018).

Based on the two tables above, the following sets forth amounts of emissions of a number of harmful air pollutants during these two years:

Air Pollutant	**2017 (Clairton)**	**2018 (Clairton)**
Ammonia	118 tons	131 tons
Benzene	13 tons	15 tons
Cyanide compounds	15 tons	16 tons
Hydrochloric acid	92 tons	104 tons
Hydrogen sulfide	109 tons	120 tons
Nox	2,599 tons	3,121 tons
Particulate matter, condensable	295 tons	293 tons
PM10	581 tons	612 tons
PM2.5	378 tons	400 tons
Sulfur dioxide	1,129 tons	1,491 tons
Total suspended particulates	30,973 tons	33,824 tons

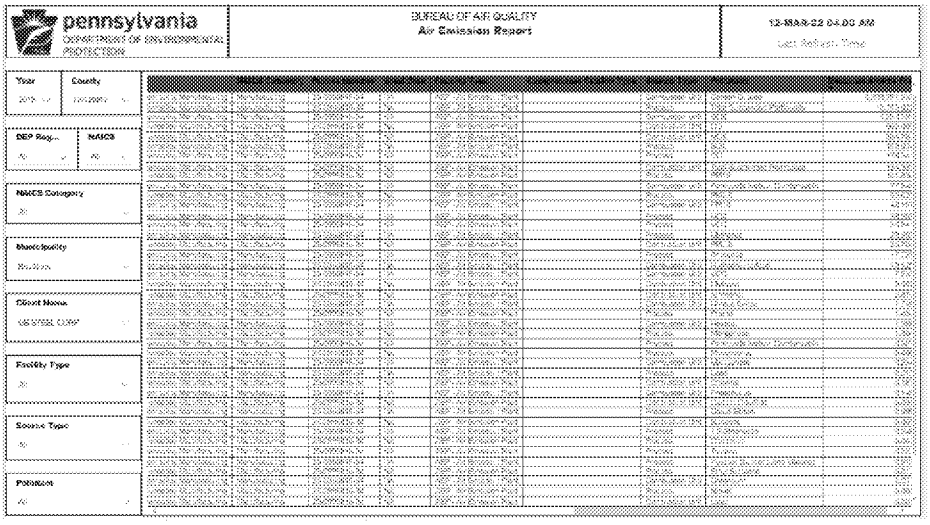
Commenters refer to these two years (2017-2018) because subsequent years are not representative of normal operations. Data for the year 2019 were affected by the fire on Christmas Eve 2018, after which the facility operated without the desulfurization plant for over three months. Data for the year 2020 were affected by the pandemic. Data for the year 2021 are not publicly available on the Department of Environmental Protection's website.

It is important that the applicant owns and operates two other major polluting facilities that are connected by a pipeline to the Clairton Coke Works. The Edgar Thomson facility is also a significant source of emissions of harmful air pollutants:



See Attachment 4 – Pennsylvania Department of Environmental Protection, Air Emissions Report for the Edgar Thomson Plant (2017).

During the following year the Edgar Thomson Plant continued to be a big polluter, as demonstrated by the following table of self-reported data in 2018:

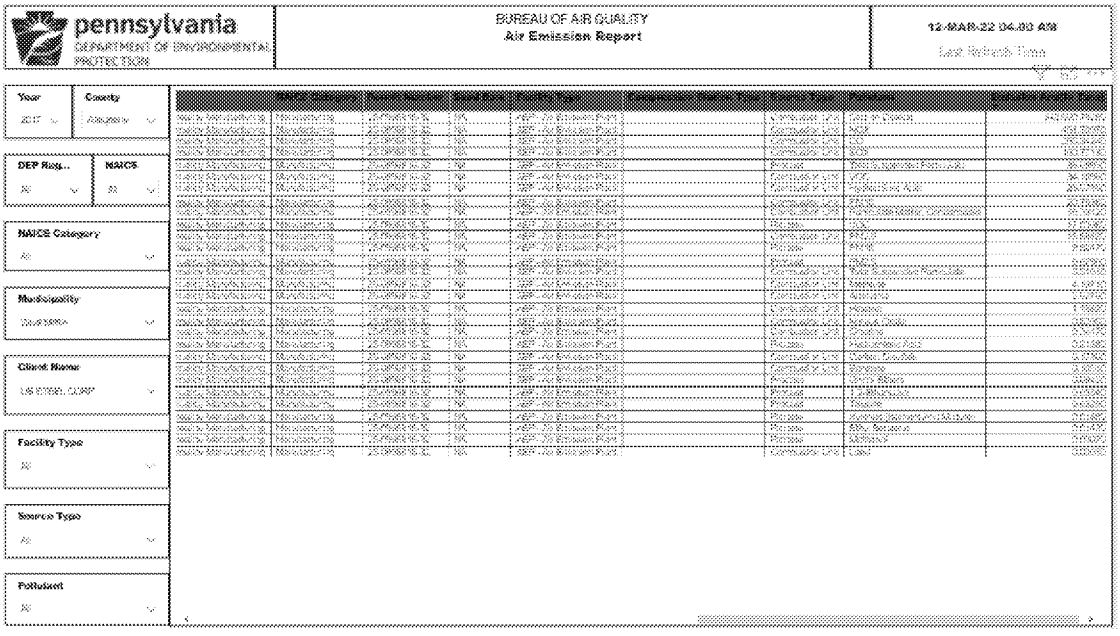


See Attachment 5 – Pennsylvania Department of Environmental Protection, Air Emissions Report for the Edgar Thomson Plant (2018).

Based on the two tables above, the following sets forth amounts of emissions of a number of harmful air pollutants during these two years:

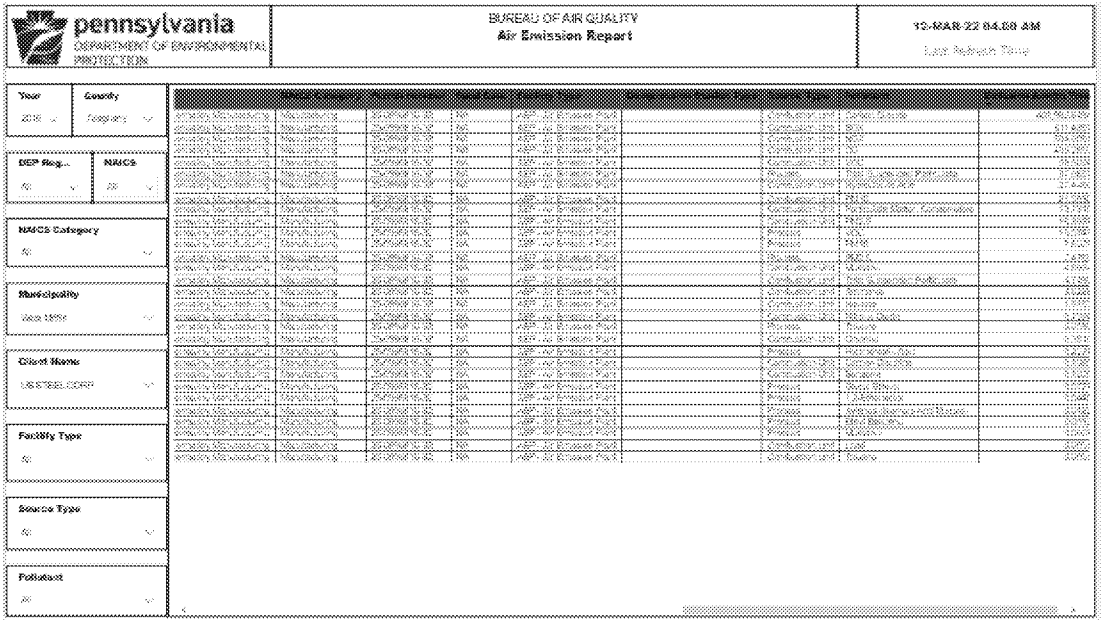
Air Pollutant	**2017 (Edgar Thomson)**	**2018 (Edgar Thomson)**
Ammonia	19 tons	20 tons
Benzene	Less than 1 ton	Less than 1 ton
Cyanide compounds	None reported	None reported
Hydrochloric acid	13 tons	13 tons
Hydrogen sulfide	None reported	None reported
NOx	500 tons	433 tons
Particulate matter, condensable	78 tons	78 tons
PM10	132 tons	143 tons
PM2.5	62 tons	76 tons
Sulfur Dioxide	1,260 tons	1,421 tons
Total suspended particulates	10,974 tons	10,909 tons

The Irvin Works is also a significant source of emissions of harmful air pollutants:



See Attachment 6 – Pennsylvania Department of Environmental Protection, Air Emissions Report for the Irvin Works (2017).

During the following year the Irvin Works continued to be a big polluter, as demonstrated by the following table of self-reported data in 2018:



See Attachment 7 – Pennsylvania Department of Environmental Protection, Air Emissions Report for the Irvin Works (2018).

Based on the two tables above, the following sets forth amounts of emissions of a number of harmful air pollutants during these two years:

Air Pollutant	**2017 (Irvin)**	**2018 (Irvin)**
Ammonia	2 tons	3 tons
Benzene	Less than 1 ton	Less than 1 ton
Cyanide compounds	None reported	None reported
Hydrochloric acid	24 tons	27 tons
Hydrogen sulfide	None reported	None reported
NOx	451 tons	504 tons
Particulate matter, condensable	18 tons	19 tons
PM10	30 tons	29 tons
PM2.5	25 tons	23 tons
Sulfur Dioxide	160 tons	611 tons
Total suspended particulates	43 tons	41 tons

For sulfur dioxide in the Draft Permit, the Department proposes an annual emissions limit of 1,906.31 tons per year. An area around the facility and two other related facilities owned and operated by U.S. Steel (Edgar Thomson and Irvin facilities) is legally designated as a nonattainment area for sulfur dioxide.

For hydrogen sulfide, the Department proposes an annual emissions limit of 103.30 tons per year.

These are only a few of the air pollutants which are allowed to be emitted in tremendous amounts from the facility:

VIII. EMISSIONS LIMITATIONS SUMMARY

The following table summarizes the estimated annual maximum potential emissions (including fugitive) from the U. S. Steel Mon Valley Works - Clairton Plant. These annual (consecutive 12 month) emission estimates assume that all sources operate continuously at their maximum capacity.

TABLE VIII-1 – Permit Emission Limitations Summary

POLLUTANT	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	2,002.69
PM_{10}	1,665.82
$PM_{2.5}$	1,085.22
Sulfur Dioxide	1,996.31
Carbon Monoxide	4,879.44
Nitrogen Oxides	9,005.37
Volatile Organic Compounds	737.76
Ammonia	168.31
Benzene	22.84
Methanol	54.00
HCL	187.74
H_2S	103.30
Phenol	10.35
Naphthalene	2.03
Toluene	0.69
TRS	12.43
Cyanide Compound	12.75
Carbon Disulfide	3.60
Hexane	23.83

*A year is defined as any consecutive 12-month period.

See Draft Permit, page 359.

The negative health effects of Clairton Coke Works' emissions have adversely impacted the health of neighboring communities on a daily basis for decades. For example, a recent ACHD report analyzed exceedances of the Pennsylvania Department of Environmental Protection (PA DEP) hydrogen sulfide ambient air quality standard that occurred at the Liberty monitoring site during the period of January 1, 2020, through March 1, 2022. *See* Analysis and Attribution of Hydrogen Sulfide (H2S) Exceedances at the Liberty Monitoring Site from January 1, 2020 through March 1, 2022, ACHD Air Quality Program (March 3, 2022). In this report, ACHD concluded that these hydrogen sulfide exceedances "can be attributed *entirely* to emissions originating at US Steel's Clairton coking facility." *Id.* at 1 (emphasis added). Chronic exposure to even low concentrations of hydrogen sulfide can cause adverse health impacts such as eye irritation, headaches, and fatigue. *Id.* at 2. The study also found that concentrations of hydrogen sulfide, sulfur dioxide, and fine particulate matter were all correlated, suggesting one source for all three pollutants. *Id.* at 5. Other harmful emissions from Clairton Coke Works include fine particulate matter, sulfur dioxide, VOCs, and the precursors to the formation of ozone, all of which have a negative impact on public health and the environment in the surrounding communities.

The air quality problem in the Mon Valley is exacerbated by the terrain and wind patterns, which leads to frequent air inversion events in the Mon Valley. From 2008-2018, there were an average of 157 inversion days each year:

INVERSION STATISTICS* FOR **2008–2019** DERIVED FROM PIT NWS DATA

Year	Avg. Strength (°C)	Strength Std. Dev. (°C)	Avg. Top (m)	Top Std. Dev. (m)	Est. Break Time** (EST)	Total Days of Inversion (%)
2008	4.1	2.4	263	155	10.0	160 (44)
2009	3.8	2.1	244	149	9.5	154 (44)
2010	4.1	2.3	226	115	9.5	171 (47)
2011	3.7	2.1	246	118	9.5	134 (37)
2012	3.9	2.1	229	96	9.5	158 (43)
2013	3.4	1.8	244	113	9.5	127 (35)
2014	3.4	1.9	233	117	9.5	141 (39)
2015	3.9	2.1	250	139	10.0	166 (45)
2016	4.1	2.5	262	146	10.0	167 (46)
2017	3.8	2.1	214	134	9.5	203 (56)
2018	3.3	2.0	260	170	10.0	146 (40)
2008-2018	**3.8**	**2.2**	**242**	**135**	**9.5**	**157 (43)**
2019	3.8	2.1	253	128	10.0	157 (44)
2008-2019	**3.8**	**2.2**	**243**	**134**	**9.5**	**157 (43)**

* **For morning (12Z) surface inversions of at least 1.0°C in strength** derived from Pittsburgh National Weather Service (PIT NWS) sounding data observed at 7 am EST. Shallow isothermal and/or unstable conditions may also be present below or within the ground inversion. A minimum surface inversion strength of 1.0°C was chosen to ensure that an inversion observed at the NWS office at a relatively high elevation was indicative of conditions throughout most of the rest of the county.

** Estimated break time is to nearest half hour Eastern Standard Time (EST). Method for calculating break time (developed by A.J. Sadar) was altered slightly for 2008 and 2014 through 2019, however, values are comparable with other years.

See Attachment 8 – Allegheny County Surface Temperature Inversion Analysis - 2019, Anthony J. Sadar, CCM, Air Pollution Administrator II (March 9, 2020) (Rev. 4/8/20), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/AnnualSfcTempInversionAnalysis-2019.pdf

Following a fire on December 24, 2018, the facility operated for over three months with the No. 2 and No. 5 pollution control rooms offline. The facility was in a continuous state of noncompliance with a number of permitting requirements for sulfur dioxide and the desulfurization unit. Under normal operations, the Clairton Plant processes coke oven gas through the No. 2 Control Room, which removes light oil, consisting of benzene and other VOCs, and the No. 5 Control Room, which removes sulfur. *See* Letter from Michael S. Rhoads, U.S. Steel, to Jayme Graham, ACHD, at 2 (Jan. 7, 2019). The processed coke oven gas is then used as fuel for processes across the U.S. Steel Mon Valley Works facilities. Despite the shutdown of the critical air pollution controls in the No. 2 and No. 5 Control Rooms, U.S. Steel continued the operation of the Clairton Plant. As a result, U.S. Steel combusted unprocessed coke oven gas as fuel and through flares at the Mon Valley Works facilities from December 24, 2018, until April 4, 2019.

Two studies found that emissions resulting from the Clairton Coke Works fire resulted in negative health impacts on people in the surrounding communities. *See* Don Hopey, *Study links more asthma cases to 2018 Clairton Coke Works fire*, Pittsburgh Post-Gazette (June 28, 2011), https://www.post-gazette.com/news/environment/2021/06/28/us-steel-clairton-coke-works-2018-fire-study-air-quality-pollution-asthma-link-toxics-exceedances-mon-valley/stories/202106240138. A Pitt study found that the Clairton facility emitted sulfur dioxide at levels 25 times higher than normal and that asthma sufferers living within 10 miles of the coke works had an 80 percent greater risk of worse symptoms following the fire. *Id.* Another study found that the rate of outpatient and hospital emergency department visits by people with asthma in the Clairton area nearly doubled in the months following the fire. *Id.* Sulfur dioxide emissions can affect breathing and exacerbate respiratory and cardiovascular diseases. *Id.*

This was not an isolated event. The facility has had a long history of noncompliance with air permitting requirements. It is a well-known story. The facility violates the law. The facility pays a fine that does not deter noncompliance. Noncompliance continues. This is evidenced by the litany of enforcement actions brought by ACHD over the years alleging various air violations. The following chart provides the lengthy list of enforcement actions brought by ACHD against Clairton Coke Works for noncompliance with air requirements just in the period between August 2014 and today:

Date	**Enforcement Action**	**Civil Penalty Sought**	**Nature of Noncompliance**
August 7, 2014	https://pacokeovens.org/wp-content/uploads/2016/08/7-August-2014-US-Steel-COA.pdf (consent order and agreement) Attachment 9	$300,000.00	"ACHD alleges that U.S. Steel has failed to perform the emissions testing of the C Battery Underfire Combustion Stack as required by Conditions IV .13.a, V .A.2.r, V.A.2.s, and V .A.2.t, and is not in compliance with the limits as set forth in Conditions V.A.l.i.l, and V.A.l.ee.l; Table l of Condition V.A.l.hh in IP 11; and Article XXI, § 2102.04.b.6." page 2, paragraph 7.
March 24, 2016	https://gasp-pgh.org/wp-content/uploads/0052cd2016-03-24-complaint-in-equity.pdf (complaint) https://gasp-pgh.org/wp-content/uploads/0052cd2016-03-24-consent-judgement.pdf (consent judgment)) Attachment 10 Attachment 11	Memorializing $3,948,000.00 in civil penalties since 2008 and assessing an additional penalty of $25,000.00	asserting 15 counts, including violations of opacity limitations, emissions limitations for sulfur dioxide, carbon disulfide, and total reduced sulfur from C battery quench tower and C battery PEC system, visible emissions from offtake piping and charging ports (lids, including aggregate charging) and doors, and opacity limitations for soaking (complaint)
June 28, 2018	Order # 180601, https://pacokeovens.	$1,091,950	asserting violations of air permit requirements during the third and

	org/wp-content/uploads/2019/06/2018-06-28-Enforcement-Order-180601.pdf Attachment 12		fourth quarters of 2017 and the first quarter of 2018 (door area emissions, high opacity door area emissions, charging ports emissions, pushing emissions, soaking emissions, and sulfur dioxide emissions, and sulfur dioxide hourly limit for C Battery Quench Tower)
October 31, 2018	Administrative Order #181002 Revised, https://pacokeovens.org/wp-content/uploads/2019/06/2018-10-31-Administrative-Order-181002-Revised.pdf Attachment 13	$613,716	asserting violations of air permit requirements during the second quarter of 2018 (excessive visible emissions from charging of coke ovens, door areas, charging ports, offtake piping, and soaking)
March 29, 2019	Enforcement Order # 190305 Attachment 14	$707,568	asserting violations during the third quarter and fourth quarter of 2018
May 10, 2019	Enforcement Order #190501, https://pacokeovens.org/wp-content/uploads/2019/06/2019-05-10-Enforcement-Order-190501.pdf Attachment 15	$337,670	asserting violations during the first quarter of 2019 (excessive visible emissions from charging of coke ovens, door areas, charging ports, offtake piping, and soaking)
December 20, 2019	Order # 191201, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Ai	$10,560	asserting failed Battery 13 Combustion Stack Test PM (November 2018 and April 2019) Department assesses an upward penalty adjustment of $4,800 to

	r_Quality/12202019-USS-Clairton-191201.pdf Attachment 16		reflect "8 Issued violations in last 2 years"
January 14, 2020	https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/2020-01-14-USSteel-Clairton.pdf Attachment 17	$743,625	Demand for Stipulated Penalties Under Settlement Agreement and Order #190604 Section IX. Stipulated Penalties - second and third quarters of 2019 (asserting violations of emissions limitations for charging, doors, offtakes, lids, pushing, travel, and soaking)
February 21, 2020	Violation No. 200202, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/2020-02-21-USSteel-Clairton.pdf Attachment 18	$13,200	asserting failed C Battery PEC System test (December 2019) Department assesses an upward penalty adjustment of $6,000 to reflect "8 Issued violations in last 2 years"
May 28, 2020	https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/USSteel-Stipulated-Penalty-Demand-Letter-Q4-2019-Q1-2020.pdf Attachment 19	$361,400	Demand for Stipulated Penalties Under Settlement Agreement and Order #190604 (October 1, 2019 through March 31, 2020) (4th and 1st Quarters) (asserting violations of emissions limitations for charging, doors, lids, offtakes, travel, pushing, soaking, and COMS)
January 25,	Violation No.	$8,800	asserting failed C Battery Comb

2021	210101, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/Clairton%201.25.21.pdf Attachment 20		Stack Test PM (October 22, 2019 and February 27, 2020) Department assesses an upward penalty adjustment of $4,000 to reflect "8 Issued violations in last 2 years"
February 19, 2021	Violation No. 210201, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/Clairton%202.19.2021.pdf Attachment 21	$4,165	Release of anhydrous ammonia and failure to timely submit breakdown report (May 2020)
March 12, 2021	https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/2_3_4Q%202020%20Demand%20Letter.pdf Attachment 22	$383,450	Demand for Stipulated Penalties Under Settlement Agreement and Order #190604 Section IX. Stipulated Penalties - April 1, 2020 through December 31, 2020 (2nd, 3rd, and 4th Quarters) asserting violations of emissions limitations for charging, doors, lids, offtakes, travel, pushing, soaking
April 1, 2021	Notice of Violation #210302, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/USS%20Clairto	unspecified	exceedances of the hydrogen sulfide (H_2S) ambient air quality standards

	n%20NOV%20H2S.pdf Attachment 23		
June 24, 2021	https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/USSteel-0052c2021-06-04ref190604-stipulated-penalties.pdf Attachment 24	$201,500	Demand for Stipulated Penalties Under Settlement Agreement and Order #190604 Section IX. Stipulated Penalties - January 1, 2021 through March 31, 2021 (1st Quarter) asserting violations of emissions limitations for charging, doors, lids, offtakes, travel, pushing, soaking
August 27, 2021	Violation No. 210801, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/USSteel-Clairton-Enforcement-Ltr-0052ord2021-08-27ref210801.pdf Attachment 25	$5,500	Release of approximately 8,449 pounds of anhydrous ammonia to the atmosphere from 11:30 to 11:45 am on June 1, 2021 Department assesses an upward penalty adjustment of $2,500 to account for "Compliance History"
December 15, 2021	Violation No. 211207, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement/USS%20Clairton%20C-	$5,500	Release of air emissions resulting from standpipe obstruction on August 27, 2021, lid leaks on August 27, 2021 from oven C21 at C Battery

	21%20standpipe%20EO.pdf Attachment 26		
March 2, 2022	Demand Letter, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Demand%20Letter%202,3,4%20Q%202021.pdf Attachment 27	$859,300	Demand for Stipulated Penalties Under Settlement Agreement and Order #190604 Section IX. Stipulated Penalties - April 1, 2021 through December 31, 2021 (2nd, 3rd, and 4th Quarters) (Method 303 inspections, ACHD inspections, USS inspections, and COMS)
March 7, 2022	Violation No. 220302, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/Enforcement%20Order%220302%20USS%20-%20H2S.pdf Attachment 28	$1,842,530	153 violations of the hydrogen sulfide ambient air concentration standard of 0.005 ppm, calculated as a 24-hour rolling average 46 exceedances in 2020 94 exceedances in 2021 13 exceedances in 2022 (through March 1, 2022)

Source: Allegheny County Health Department, Air Quality Enforcement Actions, https://www.alleghenycounty.us/Health-Department/Programs/Air-Quality/Enforcement-Actions.aspx (for enforcement actions from 2020 to the present).

Despite the assessment of over $11,000,000 in fines and penalties since 2014, the applicant has not come into compliance with the law. Notices of stipulated penalties for violations of the 2019 settlement agreement have become a regular matter in the ordinary course of business. Penalties have been imposed for the past eleven quarters – since the second quarter of 2019, when the settlement agreement was executed. Obviously, the mere assessment of millions of dollars in penalties has not been sufficient to encourage the applicant to cure noncompliance with the law.

The Department has stated that a state implementation plan is not the vehicle for securing emissions reductions. It did this in the context of the revision of the plan for fine particulates.

The Department does not believe that regulatory standards are the vehicle for securing emissions reductions. It did this when it executed a settlement agreement with the applicant, resulting in a payment of a fine of $2.5 million and a commitment by the Department not to adopt more stringent battery standards, as defined by its own agreement with the facility.

The applicant stated that the Department does not have the right to impose new requirements in the Draft Permit. It made this statement at a public hearing on the Draft Permit on February 22, 2002.

People in the community want to know this from the Department – precisely what is the legal vehicle for securing an emissions reduction from the facility? The Department should reject the applicant's arguments to the contrary and impose more stringent emissions limitations in the Title V permit.

Comments

1. **The Department should revise its approach to public participation for Title V permits by adopting more generous comment periods and posting all relevant documents in advance, to avoid problems similar to those experienced with respect to the Draft Permit.**

An application for a Title V permit may not be granted if the permitting authority has not complied with the requirements for public participation:

> **§ 70.7 Permit issuance, renewal, reopenings, and revisions.**
>
> (a) *Action on applications.* (1) A permit, permit modification, or renewal may be issued only if all of the following condition have been met:
>
> (i) The permitting authority has received a complete application for a permit, permit modification, or permit renewal, except that a complete application need not be received before issuance of a general permit under § 70.6(d) of this part;
>
> (ii) Except for modifications qualifying for minor permit modification procedures under paragraphs (e) (2) and (3) of this section, the permitting authority has complied with the requirements for public participation under paragraph (h) of this section;

See 40 C.F.R. §70.7(a)(1)(ii) (orange highlighting added for emphasis). Among other things, paragraph (h) requires "adequate procedures" for notice and a hearing:

> (h) *Public participation.* Except for modifications qualifying for minor permit modification procedures, all permit proceedings, including initial permit issuance, significant modifications, and renewals, shall provide adequate procedures for public notice including offering an opportunity for public comment and a hearing on the draft permit. These procedures shall include the following:
>
> ....

See id., 40 C.F.R. §70.7(h) (orange highlighting added for emphasis).

Failure to meet the public participation requirement is also grounds for a petition for objections to the Administrator of the Environmental Protection Agency. *See* 40 C.F.R. §70.12(a)(2(iv) ("If the petition claims that the permitting authority did not provide for a public participation procedure required under § 70.7(h), the petition must identify specifically the required public participation procedure that was not provided").

It is also a grounds for withdrawal of the Title V program. *See id.,* 40 C.F.R. §70.10(c)(2)(C)) ("Criteria for withdrawal of State programs .... Failure to comply with the public participation requirements of § 70.7(h) of this part").

On January 12, 2022 Clean Air Council made a records request to the Department for records related to the applications for renewals of the Title V permits for the Clairton Coke Works and the Edgar Thomson Works, which have the same owner and operator.

The following day, the Department published the proposed Title V permit for the Clairton Coke Works. This started a 45-day comment period for the public and a 45-day review period for the Environmental Protection Agency. (The Department set a 45-day comment period instead of the minimum 30-day period).

Given the need for time for the Department to provide the requested records, Commenters and nine other organizations made a request for an extension of the public comment for an additional 30 days, from February 28, 2022 to March 30, 2021. This was denied. *See* Attachment 29 – First extension request dated February 2, 2022 and denial letter dated February 10, 2022.

The requested records were critical in order for the public and our organizations to accurately analyze the Draft Permit, the permit application, and the review memo for the Clairton Coke Works.

Under the state right-to-know law, an agency must provide a response within 30 days. *See* Right-to-Know Law, 65 Pa. Stat. § 67.101. The Department delayed the processing of the records request, prioritized a facility that was not the subject of a public comment period (Edgar Thomson) over the Clairton Coke Works (which was the subject of a comment period), and then discovered more recent documents that still needed review.

The first 50 records or so that were provided related to the Edgar Thomson facility, not the Clairton Coke Works:

> On Thu, Feb 10, 2022 at 2:07 PM Allegheny Open Records <alleghenycountypa@mycusthelp.net> wrote:
>
> -- Please respond above this line --
>
> Karl,
>
> I realized those documents were just for Clariton. I will be reviewing the ET docs today and tomorrow.

See Attachment 30– Email from Allegheny Open Records (Thu, Feb 10, 2022 at 2:07 PM). *See also* Attachment 31– Email from Allegheny County Health Department (Thu, Feb 10, 2022 at 1:23 PM) (providing links of approximately 50 records for Edgar Thomson facility). The public comment period is for the Clairton Coke Works, not the Edgar Thomson facility.

Then the Department acknowledged a two-week delay in responding to the request, as well as the discovery of "MORE FILES" (the Department's caps, not the Commenters'):

> --------- Forwarded message ---------
> From: **Rubenstein, Elizabeth** <Elizabeth.Rubenstein@alleghenycounty.us>
> Date: Thu, Feb 10, 2022 at 4:42 PM
> Subject: 8114
> To: kkoemer@cleanair.org <kkoemer@cleanair.org>
>
> Karl,
>
> Sorry for the confusion. When I receive a request for Air docs I sent it to the Air Records Manager, and he then asks people to put files in a depository. Since it had been about 2 weeks, I had assumed all the files were there and I had our contract attorney review them. I looked them over and sent them out. Looked at the them again and saw they added MORE FILES. So I will be reviewing once again. And having a chat with air about please make sure they put all the files in a timely manner.
>
> Thanks.

See Attachment 32– Email from Elizabeth Rubenstein (Thu, Feb 10, 2022 at 4:42 PM) (orange highlighted added for emphasis).

Given the denial of the first request for extension of time and the complications of the records request, a second extension request was made for an additional thirty days for the comment period. The Department partially approved the request, allowing an additional fifteen days. *See* Attachment 33 - Second extension request dated February 11, 2022 and partial approval letter dated February 15, 2022

In short, the Department admitted technical difficulties in attempting to provide commenters with the records in a timely manner. Comments had to spend time during a public comment period making requests for extensions and making requests for records, which could have been better spent working on comments themselves.

These are not the "adequate procedures" for notice and comment that are required by the regulations. Key documents should be made available at the time of the notice of the draft permit. There is no reason not to pre-screen vital documents and make them available in advance. This would make it less likely for people to make requests for extensions of time and records requests, using up precious time during the public comment period. The Department should revise its procedures accordingly.

2. **The applicant has not properly submitted a complete application or properly supplemented it.**

Under federal regulations, an applicant is required to submit a timely and complete application for renewal of a Title V permit. *See* 40 C.F.R. §70.5(a) ("[f]or each part 70 source, the owner or operator shall submit a timely and complete permit application in accordance with this section"). There is also an affirmative duty to supplement an application, even if not requested by the state air permitting agency:

> (b) *Duty to supplement or correct application.* Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.

See id. (orange highlighting added for emphasis). Because the application was not timely or complete at the time of the application, and this has not been cured through supplementation, the Department should deny the application.

In addition, because it did not submit a timely and complete application, the facility is not entitled to the benefit of the "application shield," which would allow an operator of a Title V facility to continue to operate legally even though there is a delay in processing of the application by the agency:

> (c) *Permit renewal and expiration.* (1) The program shall provide that:
>
> (i) Permits being renewed are subject to the same procedural requirements, including those for public participation, affected State and EPA review, that apply to initial permit issuance; and
>
> (ii) Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with paragraph (b) of this section and §70.5(a)(1)(iii) of this part.
>
> (2) If the permitting authority fails to act in a timely way on a permit renewal, EPA may invoke its authority under section 505(e) of the Act to terminate or revoke and reissue the permit.

See 40 C.F.R. §70.7(c) (orange highlighting added for emphasis); *see also* 40 C.F.R. §70.7(b) ("if a part 70 source submits a timely and complete application for permit issuance (including for renewal), the source's failure to have a part 70 permit is not a violation of this part until the permitting authority takes final action on the permit application, except as noted in this section."); *see also* 40 C.F.R. §70.7(a)(1)(iii) ("For purposes of permit renewal, a timely application is one that is submitted at least 6 months prior to the date of permit expiration, or such other longer time as may be approved by the Administrator that ensures that the term of the permit will not expire before the permit is renewed….").

a. The application was not complete even at the time of its submission in 2016, relying on outdated emissions data from old stack tests.

An application is complete only if it provides all the information required by Section 70.5(c):

> (2) *Complete application.* The program shall provide criteria and procedures for determining in a timely fashion when applications are complete. To be deemed complete, an application must provide all information required pursuant to paragraph (c) of this section, except that applications for permit revision need supply such information only if it is related to the proposed change. Information required under paragraph (c) of this section must be sufficient to evaluate the subject source and its application and to determine all applicable requirements. The program shall
>
> ….

See 40 C.F.R. §70.5(a)(2). Because this is a permit renewal as opposed to a permit revision, the applicant cannot refuse to provide information under the rationale that it does not relate to a "proposed change." *See* 40 C.F.R. §70.2 (Definitions) ("Permit revision means any permit modification or administrative permit amendment"), ("Renewal means the process by which a permit is reissued at the end of its

term.").

The following is a summary of what should be included in an application, under Section 70.5(b)(2);

1. Identifying information,
2. A description of the source's processes and products,
3. Emission-related information, describing all emissions of regulated air pollutants emitted from any emissions unit, unless exempted,
4. Air pollution control requirements (citation and description of all applicable requirements, and description of or reference to any applicable test method for determining compliance),
5. Other specific information that may be necessary to implement and enforce or to determine the applicability of other applicable requirements,
6. An explanation of any proposed exemptions from otherwise applicable requirements,
7. Additional information as determined to be necessary by the permitting authority to define proposed Alternative Operating Scenarios identified by the source,
8. A compliance plan, including a narrative description of how the source will achieve compliance with requirements, for requirements for which the source is not in compliance at the time of permit issuance,
9. The use of nationally-standardized forms for acid rain portions of permit applications and compliance plans, as required by regulations promulgated under title IV of the Act.

See 40 C.F.R. §70.5(c). The preference is for more updated information, if it exists. *See* Attachment 34 -- U.S. EPA, White Paper for Streamlined Development of Part 70 Permit Applications (July 10, 1995), page 18 ("New testing is not required and emission factors are presumed to be acceptable for emissions calculations, but more accurate data are preferred if they are readily available").

In response to petitions challenging proposed permits under Title V, EPA has found permit applications to be incomplete under 40 C.F.R. §70.5(a)(2) (titled "Complete application") even after the permit has been proposed for the public – and therefore, after the expiration of the 60-day period for completeness. *See In the Matter of: We Energies Oak Creek Power Plant Administrator*, Permit No. 241007690-P10, 2009 EPA CAA Title V LEXIS 17, 58-60 (June 12, 2009) (granting petition alleging that permit application was incomplete under 40 C.F.R. §70.5(a)(2) because it did not include a startup shutdown plan); *In the Matter of: Alliant Energy - WPL Edgewater Generating Station*, Permit No. 460033090-P20, 2010 WL 7206740 EPA (Aug. 17, 2010) (granting petition alleging application was incomplete under 40 C.F.R. §70.5(a)(2) because it did not include a startup shutdown plan, a quality control and quality assurance plan, and an ESP inspection plan).

Emissions data in the 2016 application were very outdated, even at the time of its submission to the Department. Prepared by Commenters, the following is a table summarizing some outdated data:

Emissions Factors	Emissions Unit	Air Pollutants	Date
Battery Underfiring – COG Emissions Factors	Battery 13 stack	NOx CO VOC	27 April, 2012 Stack Test
		PM10 PM2.5	2006 Particle Size Data and R.J. Lee Group 1990
		PM (condensable)	16-17 October, 2014 Stack Test
	Battery 14 Stack	NOx CO VOC	27 April, 2012 Stack Test
		PM10 PM2.5	2006 Particle Size Data and R.J. Lee Group 1990
		PM (condensable)	14-15 October, 2014 Stack Test
	Battery 15 Stack	NOx CO VOC	23-24 October, 2012 Stack Test
		PM10 PM2.5	2006 Particle Size Data and R.J. Lee Group 1990
		PM (Condensable)	12, 15-16 September, 2014 Stack Test
	Battery 19 Stack	NOx CO VOC	16 October, 2012 Stack Test
		PM10 PM2.5	2006 Particle Size Data and R.J. Lee Group 1990

		PM (Condensable)	9-10 September, 2014 Stack Test
	Battery 20 Stack	NOx CO VOC	16 October, 2012 Stack Test
		PM10 PM2.5	2006 Particle Size Data and R.J. Lee Group 1990
		PM (Condensable)	11 September, 2014 Stack Test
	Battery B Stack	CO VOC	6 November, 2015 Stack Test
		PM10 PM2.5	2006 Particle Size Data and R.J. Lee Group 1990
		PM (Condensable)	6 November, 2015 Stack Test
Combustion Emissions Factors	Boiler 1, 2, R1, R2, T1, and T2	CO	July 1998 AP-42, Firing NG
		VOC	2014 Diagnostic Stack Test, Firing COG
Cooling Tower Emission Factors	Keystone Cooling Tower	PM PM2.5 PM10 PM (condensable)	Average of Stack Test Cooling Tower Stack #3 June 22, 2011, September 1, 2011 for High and Low Fan
WWT Surge Tank Ammonia Flare Emission Factors		NOx SO2 VOC	Source test August 31, 2011
		Ammonia	2003 Source Stack Test during WWT surge tank operation only

Ammonia Tanker Loading Ammonia Flare Emission Factors		CO NOx PM-2.5 (filterable) PM-10 (filterable) SO2 PM - T (filterable) VOC Ammonia	Source test August 31, 2011

See Attachment 35 – 2016 Application, Attachment K (Supporting Calculations) (Excerpts), pdf pages 554, 560, 562, and 569. The data are from 2000, 2003, 2006, 2007, 2008, 2011, 2012, and 2014. In some instances, the facility appropriated values from other facilities operated by other companies (the Burns Harbor and ABC Coke facilities in Indiana and Alabama) to adopt emissions factors for its coke batteries -- and took an average of those values, at that.

We know this is very much out of date because stack tests are supposed to be performed regularly every couple of years, according to the Department:

5.0 **TESTING REQUIREMENTS:**

Emission testing once every two years is required for the sources listed below. This requirement along with the parameters to be tested and references to the applicable testing methods and procedures are included in the Title V Operating Permit.

Source ID's	Source Name	Pollutant
P001-P003; P007– P011	Coke Battery Combustion Stacks	NO_X, CO and SO_2
P012	Coke Battery Combustion Stacks	NO_X CEMS, CO and SO_2
P019	SCOT Plant Incinerator	Sulfur Compounds
B001 & B002	Boilers No. 1 and 2	NO_X CEMS, CO and SO_2
B005 & B006	Boilers R1 and R2	NO_X CO and SO_2
B007 & B008	Boilers T1 and T2	NO_X CO and SO_2

See Review Memorandum dated January 13, 2022, page 35 (orange highlighting added for emphasis). *See also* Attachment 1 – 2012 Permit, pdf pages 50 (P001-P003), 80-81 (P007-P009), 112-113, (P010-P011), 143-144 (P012), 184 (P019), 242, 245 (B001 & B002), 248 (B005 & B006), 251 (B007 & B008).

In addition, there are numerous flaws in the application that render it incomplete. The application relies on outdated information from stack tests, and does not address several changes at the facility after 2016, which affect the determination of the nature and extent of air emissions.

b. Emission-related information in the 2016 application does not reflect any attempted repairs to air pollution control equipment following a catastrophic fire in December 2018.

The catastrophic fire in December of 2018 had a significant impact on the facility's desulfurization plant and the repairs took months to complete, yet these repairs seem to have not been taken into account at all in the proposed renewal. It is not stated what sort of impact on the

emissions of the desulfurization plant they would have. Also, because much of the older equipment was in disrepair leading up to the fire, it is not a foregone conclusion that emissions would be equal to those before the repair. There should be some verification of what the new emissions are.

Given that the desulfurization plant not only has a large quantity of emissions associated, but it also has a significant impact on the emissions of any process throughout the Mon Valley Works that combusts the coke oven gas that passes through it, any changes to it should be considered very carefully. This is a further reason that the Department's reliance on emissions data in the 2016 application is insufficient. The Department should consider and account for any replacement and repair when revising the Draft Permit.

c. Unit level air emissions limits set forth in the 2016 application and the proposed renewal are absurd.

Both the 2016 application and the Draft Permit set forth numerous emissions limitations that are so high that they are in effect not limitations at all. Emissions limitations for certain emissions units are significantly higher than the potential to emit (PTE) for those units. The Department should correct this in a revised Draft Permit.

Before installation of an emissions unit, it is often the practice to determine limits and PTEs using general emissions factors in AP-42. From available records, it appears that in the subsequent years of operation, actual site-specific emission factors have been developed from data gathered through stack tests and other data collection methods. These new, more representative, emissions factors have since been applied to the unit level PTE, but were never applied to the emission limits. This has led to a large number of emissions limits that, by the definition of PTE, could never be reached because they are greater than the PTE. They are therefore not actually limits at all. Some of the limits at issue are an entire order of magnitude greater than the PTE. As these limits stand they are patently absurd, and do not limit anything at all.

Below is a non-exhaustive table of annual unit level emissions that exceed the PTE by a large margin. The limits come directly from the proposed permit and the PTEs come from attachment G of the 2016 application.

Source	**Pollutant**	**Limit (tpy)**	**PTE (tpy)**	**Limit is X times Higher than PTE**
5A Quench Tower	Particulate Matter	128.11	10.23	12.52x
	VOC	113.29	10.8	10.49x
7A Quench Tower	Particulate Matter	152.05	17.11	8.89x

	VOC	108.16	13.22	8.18x
Batt. C Quench Tower	Particulate Matter	108.3	14.95	7.24x
Batt. C Stack	NOx	625.7	571.36	1.1x
	VOC	55.2	16.43	3.36x
	HCl	22	13.74	1.6x
Boiler 1	Particulate Matter	66.58	8.65	7.7x
Boiler 2	Particulate Matter	42.14	5.43	7.76x
	NOx	780	613.04	1.29x
Boilers R1+ R2	Particulate Matter	40.12	9.57	4.19x
Boilers T1+ T2	Particulate Matter	27.34	3.75	7.29x
Ammonia Flare	Ammonia	14	.22	63.64x

Upon further comparison of the application and the Draft Permit, significant differences can be seen in SO2 emissions limits as well. In the application the limits are often significantly higher than the PTEs listed, however in the Draft Permit the limits are near or below the PTEs presented in the application. *See* Attachment 36 – 2016 Application, Attachment G, pdf pages 480-506. This demonstrates the Department's willingness and ability to adjust limits downward so that they are actually representative of the emissions profile of the facility.

3. **The Department should require the applicant to prepare a compliance plan to address regular noncompliance with the Clean Air Act and include a schedule of compliance as part of the permit.**

The application is incomplete because the applicant failed to include a compliance plan to address its regular problems with complying with the law and permit requirements relating to its air emissions. For a number of years, the facility has been in regular noncompliance with its Title V permit under the federal Clean Air Act. The facility did not submit any materials regarding a compliance plan when it submitted its application in September 2016. The Department should require the facility to submit a compliance plan to address the regular

noncompliance with its Title V permit. Without a compliance plan the application is incomplete as is.

The federal Clean Air Act requires the inclusion of a compliance plan in an application for a Title V permit:

> (b) ***Compliance plan***
>
> (1) The regulations required by section 7661a(b) of this title ***shall include a requirement that the applicant submit with the permit application a compliance plan describing how the source will comply with all applicable requirements under this chapter***. The ***compliance plan*** shall include a ***schedule of compliance***, and a schedule under which the permittee will submit progress reports to the permitting authority no less frequently than every 6 months.
>
> (2) The regulations shall further require the permittee to periodically (but no less frequently than annually) certify that the facility is in compliance with any applicable requirements of the permit, and to promptly report any deviations from permit requirements to the permitting authority.

Section 503(b) of the Clean Air Act, 42 U.S.C. §7661b(b) (bold italics added for emphasis).

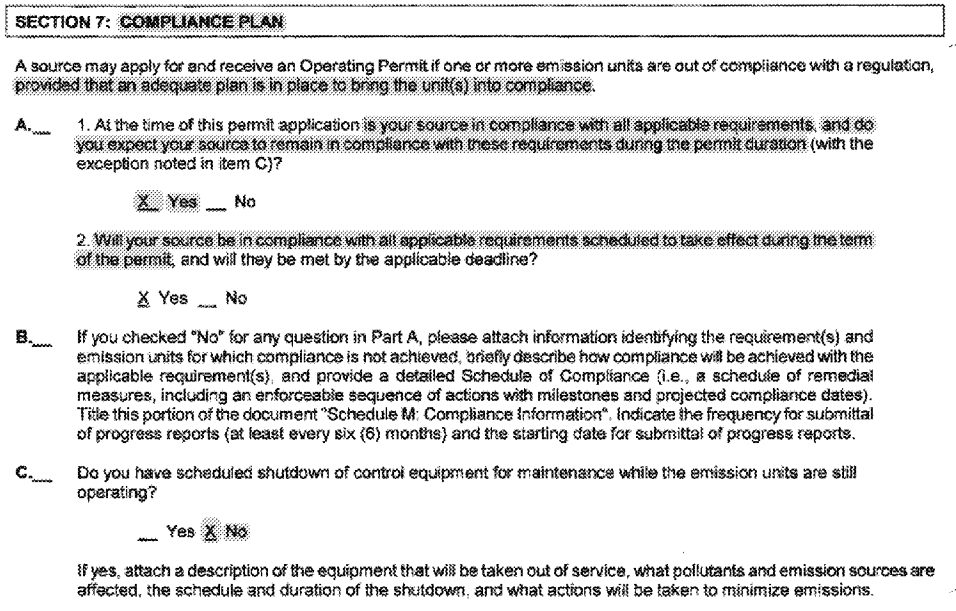
By "schedule of compliance," the Clean Air Act contemplates something specific. This includes "remedial measures," and "enforceable sequence of actions or operations, leading to compliance":

> (3) ***Schedule of compliance***
>
> The term "***schedule of compliance***" means a schedule of remedial measures, ***including an enforceable sequence of actions or operations***, ***leading to compliance*** with an applicable implementation plan, emission standard, emission limitation, or emission prohibition.

See Section 501(3) of the Clean Air Act, 42 U.S.C. §7661(3). Only if a facility is in compliance would it not be necessary to submit detailed schedules of compliance. *See* Final Rule, 57 Fed. Reg. 32,250, 32,274 (col. 1-2) (July 21, 1992).

The regulations expand on this statutory requirement by also requiring a facility that is not in compliance to prepare "a narrative description of how the source will achieve compliance with such requirements." *See* 40 C.F.R. §70.5(c)(8)(ii)(C).

In its 2016 application, the facility simply asserted that it was in compliance with applicable requirements and that it would continue to be in compliance with them during the duration of the permit:



SECTION 7: COMPLIANCE PLAN

A source may apply for and receive an Operating Permit if one or more emission units are out of compliance with a regulation, provided that an adequate plan is in place to bring the unit(s) into compliance.

A.__ 1. At the time of this permit application is your source in compliance with all applicable requirements, and do you expect your source to remain in compliance with these requirements during the permit duration (with the exception noted in item C)?

X Yes __ No

2. Will your source be in compliance with all applicable requirements scheduled to take effect during the term of the permit, and will they be met by the applicable deadline?

X Yes __ No

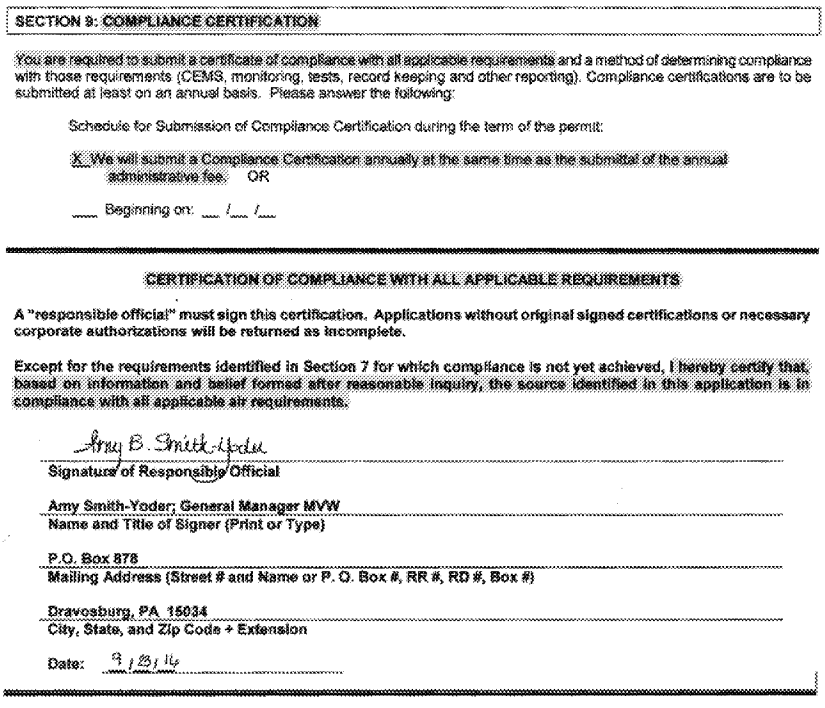
B.__ If you checked "No" for any question in Part A, please attach information identifying the requirement(s) and emission units for which compliance is not achieved, briefly describe how compliance will be achieved with the applicable requirement(s), and provide a detailed Schedule of Compliance (i.e., a schedule of remedial measures, including an enforceable sequence of actions with milestones and projected compliance dates). Title this portion of the document "Schedule M: Compliance Information". Indicate the frequency for submittal of progress reports (at least every six (6) months) and the starting date for submittal of progress reports.

C.__ Do you have scheduled shutdown of control equipment for maintenance while the emission units are still operating?

__ Yes X No

If yes, attach a description of the equipment that will be taken out of service, what pollutants and emission sources are affected, the schedule and duration of the shutdown, and what actions will be taken to minimize emissions.

See Attachment 37 – Application, Application Form, Section 7, pdf page 12 of 1052 (orange highlighting added for emphasis). Accordingly, the applicant included a certification that it was in compliance with applicable requirements:



SECTION 9: COMPLIANCE CERTIFICATION

You are required to submit a certificate of compliance with all applicable requirements and a method of determining compliance with those requirements (CEMS, monitoring, tests, record keeping and other reporting). Compliance certifications are to be submitted at least on an annual basis. Please answer the following:

Schedule for Submission of Compliance Certification during the term of the permit:

X We will submit a Compliance Certification annually at the same time as the submittal of the annual administrative fee. OR

__ Beginning on: __/__/__

CERTIFICATION OF COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS

A "responsible official" must sign this certification. Applications without original signed certifications or necessary corporate authorizations will be returned as incomplete.

Except for the requirements identified in Section 7 for which compliance is not yet achieved, I hereby certify that, based on information and belief formed after reasonable inquiry, the source identified in this application is in compliance with all applicable air requirements.

Amy B. Smith-Yoder

Signature of Responsible Official

Amy Smith-Yoder; General Manager MVW

Name and Title of Signer (Print or Type)

P.O. Box 878

Mailing Address (Street # and Name or P. O. Box #, RR #, RD #, Box #)

Dravosburg, PA 15034

City, State, and Zip Code + Extension

Date: 3/23/16

See id., Application Form, Section 9, pdf page 13 of 1052 (orange highlighting added for emphasis). The applicant also committed to submitting annual certifications of compliance in the future. *See id.*

The applicant made this certification despite the fact that it identified a total of 18 alleged violations from 2011 to September 2016. *See* Attachment 38 – Application, Attachment H (Air Pollution Control Act Compliance Review Form), pdf pages 516-518 of 1052.

In addition, the applicant included a 2015 Annual Compliance Certification that only covered specific units other than the batteries. *See* Attachment 39 – Application, Attachment P (2015 Annual Compliance Certification), pdf pages 967-1052 (addressing equipment-specific permit conditions V.K through V.GG). The conditions for the batteries are located in previous conditions, and are not covered by the annual certification:

See Attachment 1 – 2012 Permit, page 2. Therefore, the annual compliance certification does not speak to opacity violations associated with the batteries, among other things associated with the batteries. Consequently, the application does not convey the proper picture.

The truth of the matter is that the facility has regularly been in noncompliance with the requirements of the Title V permit, law, and regulations – for years.

In March 2016, PennFuture submitted a notice of intent to sue, alleging the facility violated applicable emissions limitations for the batteries on approximately 6,700 occasions between January 1, 2012 and May 31, 2015. *See* Attachment 40 – PennFuture, Notice of Intent to Sue dated January 28, 2016. For Batteries 1, 2, 3, 13, 14, 15, 19, 20, and Battery B, PennFuture alleged numerous violations of the 20% opacity standard (Art. XXI, Section 2105.21.f.3) and the 60% opacity standard (Section 2105.21.f.4). For the Pushing Emission Control (PEC) Systems for these batteries, PennFuture alleged numerous violations of the 20% opacity standard (Section 2105.21.e.4), the Reduced Efficiency Pushing Standard (Section 2105.03), and the Continuous Operation Standard (Section 2105.03).

Although these are violations for the batteries, they were ignored in the 2015 Annual Compliance Certification.

Moreover, since 2014 there have been at least eighteen enforcement actions commenced by the Department for the recovery of civil penalties for alleged violations. *See* Background above, which Commenters incorporate by reference into these comments.

Despite the assessment of over $11,000,000 in fines and penalties since 2014, the applicant has not come into compliance with the law. Notices of stipulated penalties for violations of the 2019 settlement agreement have become a regular matter in the ordinary course of business. Penalties have been imposed for the past eleven quarters – since the second quarter of 2019, when the settlement agreement was executed. Obviously, the mere assessment of millions of dollars in penalties has not been sufficient to encourage the applicant to cure noncompliance with the law.

All evidence demonstrates that the facility will be "not in compliance at the time [of] permit issuance," under Section 70.5(c)(8)(ii)(C). Where the facility is assessed civil penalties in the order of six figures every quarter, this is a virtual certainty.

Accordingly, the Department should follow the federal law and regulations and require the facility to prepare a "schedule of compliance," including "remedial measures" and "enforceable sequence of actions or operations, leading to compliance." *See* Section 501(3) of the Clean Air Act, 42 U.S.C. §7661(3). In addition, the Department should require the facility to prepare "a narrative description of how the source will achieve compliance with such requirements." *See* 40 C.F.R. §70.5(c)(8)(ii)(C). The present application and the proposed Title V permit are deficient.

These federal requirements mean something more than simply writing a periodic check to the Department. This means that the facility should explain what it has been doing to prevent leaks from charging, doors, lids, offtakes, travel, soaking, and COMS – areas of noncompliance identified in the periodic enforcement orders. This should also include a schedule for compliance.

The facility should do more than point to the minimum regulatory requirements that are already required, because that would be a circular argument.

40 C.F.R. §70.6(c)(3) requires that all Title V permits contain a compliance schedule consistent with §70.5(c)(8). Therefore, the Department is required to include a compliance schedule containing the elements described above in the final permit.

4. **The Draft Permit fails to incorporate all applicable requirements and should be revised to expressly incorporate the applicable requirement that U.S. Steel is prohibited from releasing benzene, coke oven emissions, or other air pollutants except as explicitly permitted.**

The Draft Permit should expressly incorporate the "applicable requirement" contained in Article XXI § 2101.11(b)(1), and recently acknowledged by the Third Circuit Court of Appeals, that prohibits U.S. Steel from releasing benzene, coke oven emissions, or any other air contaminant except as is explicitly permitted. The Draft Permit fails to include all applicable requirements and should be revised to expressly include a prohibition on releasing air pollutants

except as explicitly permitted by Article XXI of ACHD's regulations, which is an applicable requirement.

The Clean Air Act implementing regulations require that each Title V permit must include "[e]missions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance." *See* 40 C.F.R. § 70.6(a)(1); *see also id.* § 70.2 ("applicable requirements), § 70.3(c) ("For major sources, the permitting authority shall include in the permit all applicable requirements for all relevant emissions units in the major source.").

Under ACHD's regulations, Article XXI, a plant may not operate if it releases any air pollution unless "explicitly permitted by this Article." Art. XXI §2101.11(b)(1) ("It shall be a violation of this Article for any person to: 1: Operate, or allow to be operated, any source in such manner as to allow the release of air contaminants into the open air or cause air pollution as defined in this Article, except as is explicitly permitted by this Article"). This regulatory requirement was approved by EPA as part of the ACHD's State Implementation Plan on November 14, 2002. *See* 40 C.F.R.§ 52 Subpart NN; *see also* Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Revisions to Allegheny County Articles XX and XXI, EPA, 67 Fed. Reg. 68,935 (Nov. 14. 2002); *see also* "EPA Approved Regulations in the Pennsylvania SIP," www.epa.gov (*see* (c)(2), "EPA-Approved Allegheny County Health Department (ACHD) Regulations," Article XXI, § 2101.11), *available at* https://www.epa.gov/sips-pa/epa-approved-regulations-pennsylvania-sip (last accessed Mar. 10, 2022).

The language of Article XXI § 2101.11(b)(1) is an "applicable requirement" under the Clean Air Act that is required to be explicitly included in the Title V Permit. This is because under the Clean Air Act, "[*a*]*pplicable requirement* means all of the following as they apply to emissions units in a part 70 source . . . [a]ny standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under title I of the [Clean Air] Act that implements the relevant requirements of the Act, including any revisions to that plan promulgated in part 52 of this chapter." 40 C.F.R. § 70.2 ("applicable requirement"). Because Article XXI § 2101.11 is a requirement approved by EPA when it approved ACHD's Regulation in the Pennsylvania SIP under part 52 of section 40 of the Code of Federal Regulations, it is an applicable requirement.

The General Conditions section of the Draft Permit, while referencing § 2101.11, does not expressly prohibit the release of air contaminants in a manner that is not explicitly permitted by this Article or the terms of a permit issued under that Article. The General Conditions section of the Draft Permit's reference to § 2101.11, rather, only expressly prohibits:

- "fail[ing] to comply with, or [causing or assisting] in the violation of, any requirement of this permit, or any order or permit issued pursuant to authority granted by Article XXI," and

- the operation of "any source of air contaminants in such a manner that emissions from such source:

o "a. Exceed the amounts permitted by this permit or by any order or permit issued pursuant to Article XXI;

o "b. Cause an exceedance of the ambient air quality standards established by Article XXI § 2101.10; or

o "c. May reasonably be anticipated to endanger the public health, safety, or welfare."

Draft Permit, Sec. III.1, at 24.

These conditions and specific prohibitions in the Draft Permit fail to include a prohibition on a release of an air contaminant in a manner that is not explicitly permitted by the permit, which *is* prohibited in Article XXI § 2101.11(b)(1).

In 2021, the Third Circuit reviewed the Article XXI reporting requirements applicable to U.S. Steel's Clairton facility in a lawsuit brought by Clean Air Council represented by Environmental Integrity Project alleging that U.S. Steel violated the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"). Clean Air Council alleged that U.S. Steel violated CERCLA by failing to report U.S. Steel's releases of benzene, coke oven emissions, and other pollutants that occurred during the December 24, 2018 fire at the Clairton Coke Works or its releases of those and other pollutants that occured in the months that followed, when U.S. Steel decided to continue operating and sending unprocessed coke oven gas through the plant despite the No. 2 and No. 5 pollution control rooms having been rendered inoperable by the fire.

The Third Circuit was reviewing a motion to dismiss by U.S. Steel, which argued that U.S. Steel was exempt from having to report to the National Response Center its releases of benzene, coke oven emissions, and other contaminants following the fire that started at the Clairton Coke Works on December 24, 2018 under the reporting requirements of CERCLA because such releases were "covered" by the requirements of the facility's Clean Air Act permits. U.S. Steel argued that because all of its releases during that incident were "subject to" Clean Air Act permits or control regulations, they were "federally permitted" and therefore did not have to be reported to the NRC, citing the "federally permitted release" exemption contained in the CERCLA statute.

Clean Air Council argued that, at the very least, benzene emissions from some of the units were not subject to any identifiable permit limits or conditions at all, and therefore did not qualify for the exemption from CERCLA disclosure.

Citing Article XXI § 2101.11(b)(1), the Third Circuit held that because Article XXI prohibited emissions of any pollutant not explicitly authorized by permit or rule, such emissions were "subject to" federal permitting. The Third Circuit stated:

> Under Article XXI, a plant may not operate if it releases any air pollution, including benzene, unless "explicitly permitted by this Article." Art. XXI § 2101.11(b)(1); 42 U.S.C. § 7412(b)(1). In other words, the benzene emissions were covered by (and in violation of) those permits.

Clean Air Council v. United States Steel Corp., 4 F.4th 204, *212 (3d. Cir. 2021). The Third Circuit additionally held that because "none of the facilities' permits authorize the emission of any amount of coke oven gas," "the emissions violated the permits that covered them" when they were released during and following the December 24, 2018 fire at Clairton. *Id.*

Because the Third Circuit relied on representations by the U.S. Steel in concluding that these emissions violated the permit, the express language of Article XXI Section 2101.11(b)(1) should be included in the Title V permit. While the Third Circuit did not discuss this at length, it is particularly critical that SIP rules be incorporated into Title V permits because they are federally enforceable requirements and because U.S. Steel might argue that U.S. Steel and similar Title V permit holders may be "shielded" from having to comply with standards that are not incorporated in Title V permits. *See* 42 U.S.C. § 7661c(f); 25 Pa. Code § 127.516; ACHD Article XXI § 2103.22(e).

Consequently, the General Conditions section of the Title V permit should be revised to explicitly include the language from Article XXI § 2101.11(b)(1), which is an applicable requirement that is not covered by the modified reference to Article XXI § 2101.11 in the Draft Permit. Specifically, the Draft Permit should be modified to state that U.S. Steel is prohibited from "[o]perat[ing], or allow[ing] to be operated, any source in such manner as to allow the release of air contaminants into the open air or cause air pollution as defined in this Article, except as is explicitly permitted by this Article." Without this language from Article XXI § 2101.11(b)(1) expressly included in the Title V permit that is finalized, the permit would fail to be in compliance with the Clean Air Act's requirement that the Title V permit must include "[e]missions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance." *See* 40 C.F.R. §§ 70.6(a)(1), 70.2, 70.3(c).

5. <u>The Department should require a compliance plan and compliance schedule to address U.S. Steel's unaddressed, ongoing noncompliance with the breakdown reporting requirements of Article XXI.</u>

The Department should require a compliance plan and compliance schedule to require compliance with Article XXI's breakdown reporting provisions, which U.S. Steel failed to comply with following its release of air contaminants during and after the December 24, 2018 fire at the Clairton Plant. Upon Commenters' information and belief following several attempts to obtain this information, U.S. Steel has, to date, failed to provide to the Department a notification that contains the required information, such as the identification of specific materials emitted, the toxic qualities of those specific materials, or the estimated quantities of each material emitted during and in the aftermath of the December 24, 2018 fire.

The Third Circuit in *Clean Air Council,* 4 F.4th 204, discussed in the preceding subsection, also discussed the Article XXI breakdown reporting provisions. These Article XXI provisions require that breakdowns be reported to the Department no later than 60 minutes after the commencement of the breakdown and reported in writing no later than seven days after the original notification. Article XXI, § 2108.01(c)(1). They further specify that the required oral and written notices must include all pertinent facts, specifically including "[i]dentification of the specific material(s) which are being, or are likely to be, emitted, together with a statement

concerning its toxic qualities, including its qualities as an irritant, and its potential for causing illness, disability, or mortality" and "the estimated quantity of each material being or likely to be emitted." *Id.* § 2108(2)(D)-(E).

The massive fire on December 24, 2018 that took offline the No. 2 and No. 5 pollution control rooms at U.S. Steel's Clairton Coke Works, and the decision of U.S. Steel to continue to operate the Clairton Coke Works by sending unprocessed coke oven gas to the Clairton (and Irvin and Edgar Thomson) boilers for months thereafter until the pollution control systems were back in operation resulted in unquestionably high levels of pollution of various contaminants being released into the air. *See, e.g.,* Complaint, *PennEnvironment, Inc. and Clean Air Council v. United States Steel Corp.,* https://pennenvironment.org/sites/environment/files/resources/complaint.pdf (3d Cir., filed Apr. 29, 2019) (alleging over 12,000 violations of the Clean Air Act stemming from the fire and the operation of the Clairton plant in the months that followed).

In the recent *Clean Air Council* decision, the U.S. Court of Appeals for the Third Circuit, reviewing not the issue of U.S. Steel's alleged violation of Clean Air Act requirements but the issue of U.S. Steel's failure to report its pollutant releases as required by the notification provisions of CERCLA, specifically held that U.S. Steel could be liable under the Clean Air Act for not complying with applicable reporting requirements contained in ACHD's Article XXI regulations and incorporated into the SIP. Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Revisions to Allegheny County Articles XX and XXI, EPA, 67 Fed. Reg. 68,935 (Nov. 14. 2002) (to be codified at 40 C.F.R. 52); *see also* "EPA Approved Regulations in the Pennsylvania SIP," www.epa.gov (*see* (c)(2), "EPA-Approved Allegheny County Health Department (ACHD) Regulations," Article XXI, § 2108), *available at* https://www.epa.gov/sips-pa/epa-approved-regulations-pennsylvania-sip (last accessed Mar. 10, 2022).

Specifically, the Third Circuit held that:

> U.S. Steel remains subject to liability for its hazardous releases under the [Clean Air] Act. Indeed, four months before filing this suit, the Council sued U.S. Steel on that precise theory. U.S. Steel could also be liable for not *reporting* the benzene and the amounts of hydrogen-sulfide and coke-oven emissions to the County. But again, any liability would come from the [Clean Air] Act, not CERCLA. Art. XXI, § 2108.01(c)(1), (2)(D)–(E).

Clean Air Council v. United States Steel Corp., 4 F.4th 204, *210 (3d. Cir. 2021).

In fact, U.S. Steel had represented that the reporting requirements of Article XXI § 2108.01 apply to it for its emissions from the fire at Clairton many times in its Appellate brief to the Third Circuit. *See, e.g.* Attachment 41 – Brief of Appellee U.S. Steel in *Clean Air Council v. U.S. Steel,* 4 F.4th 204 (3d Cir. 2021), at 22 ("Article XXI reporting further requires: (1) identification of specific materials which are being, or are likely to be, emitted, together with their toxic qualities; (2) the estimated quantity of each material being, or likely to be, emitted…"), 25 ("Consistent with Article XXI, USS is required to monitor the Plants' processes and in the event any equipment breaks down, to immediately report to ACHD detailed

information about *any* emissions of *any* amounts of 'materials,' including their 'toxic qualities,' the 'estimated quantity of each material' emitted…" (emphasis in original)) & 48.

U.S. Steel even went on to assert that it *had complied* with these Article XXI reporting requirements (*see id.* at 26), such that reporting under CERCLA to the National Response Center would have been "redundant." *See, e.g. id.* at 17, 40. According to U.S. Steel's Third Circuit Appellate brief, "Article XXI . . . *does* require 'immediate reporting,' and requires it far more broadly, in terms of both the types and quantities of substances released, than does CERCLA…. These regulatory requirements triggered USS' obligation to report the alleged emissions to ACHD, and it did." *Id.* at 48. U.S. Steel also claimed, "[w]ithin minutes, USS reported the fire and the ensuing emissions from COG [coke oven gas] combustion to ACHD. JA-090-092; *see also* JA-080, ¶ 5…." *Id.* at 26 (also citing ACHD enforcement orders in the record at JA-047-065). *See* Attachment 42 – excerpts of pages cited by U.S. Steel for its assertion that it reported to ACHD as required by Article XXI; *see also id.* at 35 ("[b]ecause the challenged emissions were governed by its federal CAA permits, USS reported them to ACHD.").

To date, however, U.S. Steel has produced no evidence that it disclosed the identity, amount, or toxic qualities of these emissions, and Commenters have received no such information from ACHD in response to our Right-to-Know Law requests for such reports. First, U.S. Steel has failed to comply with the reporting requirements of § 2108 because the evidence U.S. Steel presented to the Third Circuit in the above-referenced case in the pages U.S. Steel cited as its record that it had reported to ACHD failed to even identify the pollutants released during the fire, let alone their toxic qualities or the other information required under Article XXI Section 2108.01(c)(1). To attempt to prove its compliance with the disclosure requirements of Article XXI and its Title V permits to the Third Circuit in *Clean Air Council,* 4 F.4th 204, U.S. Steel represented that it had complied with Article XXI's breakdown reporting requirements, but the evidence it presented prove otherwise. U.S. Steel cited only exhibits JA-090–92, 093, 080, and 047–65 to the record in the case (*see* Attachment 41 – Brief of Appellee U.S. Steel in *Clean Air Council v. U.S. Steel,* 4 F.4th 204 (3d Cir. 2021), at 26, (also cited in the preceding paragraph)). However, JA-090–92 is merely comprised of three handwritten notes that note "possible higher sulfur grains in gas" and "possible high sulfur in gas," due to "fire on roof of vacuum," and neither JA-090–92, nor any of these other exhibits cited by U.S. Steel, identify any of the specific pollutants released during and after the December 2018 fire, let alone provide a statement concerning their toxic qualities or the estimated quantity of any pollutant. *See* Attachment 42 -the excerpts of the pages cited by U.S. Steel in that case.

Furthermore, efforts of Environmental Integrity Project, which served as counsel representing Clean Air Council in that Third Circuit case, during the periods before, during, and after that litigation to obtain any additional reports regarding emissions from during or following the fire through Right-to-Know Law requests directed at ACHD have not produced any evidence of reports filed by U.S. Steel that complied with the Article XXI reporting requirements. *See, e.g.,* Letter from Philip Sebasco, Environmental Integrity Project, to Jerry Tyskiewicz, Allegheny County Open Records Officer, Re: Formal Right-to-Know-Law Request for Records and Data Relating to Benzene Emissions in Allegheny County (Feb. 3, 2022) (which has not yet produced any documents showing additional reports to ACHD about benzene emissions during or following the fire).

Title V permits are required to include a schedule of compliance as necessary to assure compliance with applicable requirements of the Clean Air Act. 42 U.S.C. § 7661c(a) ("[e]ach permit issued under this subchapter shall include enforceable emission limitations and standards, a schedule of compliance, . . . and such other conditions as are necessary to assure compliance with applicable requirements of this chapter, including the requirements of the applicable implementation plan.").

As there is no dispute that U.S. Steel is subject to these requirements (in fact, it has represented that they apply to it, as cited above) either they need to report the identity, amount, and toxicity of the specific pollutants, as required, or report that they have failed to comply with these requirements and propose a schedule for compliance.

It is appropriate and correct that the Department has incorporated the specific requirements of Article XXI § 2108.01(c)(1) and 2108.01(c)(2)(D)-(E) expressly into the Draft Permit as these are rightly applicable requirements that need to be explicitly included. *See* Draft Permit, at 37, Section IV.9. However, given that many years have passed now and U.S. Steel remains in noncompliance with these reporting requirements, and even a federal Appellate court has recognized this noncompliance, it is imperative that the Department require a schedule of compliance be included in the Draft Permit with a date certain for reporting the identities, quantities, and properties of all pollutants released during and following the December 24, 2018 fire.

6. **The Department should revise the Draft Permit to include provisions requiring "hot idle" in the event of noncompliance with the law.**

Because fines, penalties, and the regulatory requirement to include a compliance plan in a Title V application have not been sufficient to lead to compliance for the applicant, the Department should do more.

Allegheny County's Air Pollution Control Regulations grant the Department with broad enforcement powers in the event a source is in violation of its permit:

> Whenever the Department finds . . . that any source is being operated in violation of any provision of this Article, including any provision of any permit or license issued pursuant to this Article, ***it may order the person responsible for the source to comply with this Article or it may order the immediate shutdown of the source or any part thereof.***

Art. XXI § 2109.03(a) (emphasis added). Enforcement orders may include "orders modifying, suspending, terminating or revoking any permits" and "orders requiring persons to . . . cease operation of a facility or air containment source which, in the course of its operation, is in violation of any provision of this Article, or any permit . . . ." Art. XXI § 2109.03(a)(1). The Department may issue such an order if it "finds that any condition existing in or on the facility or source involved is causing, contributing to, or creating danger of air pollution, or if it finds that the permittee or any person is in violation of any provision of this Article." *Id.* "The Department may . . . require compliance with such conditions to prevent or abate air pollution or effect the purposes of this Article." Art. XXI § 2109.03(a)(2).

These regulations give the Department the authority to order a facility to cease operation of any part of a source in the event it is in violation of regulations or its permit, or if the facility is creating a danger of air pollution. *See* Art. XXI § 2109.03(a)(1). The Department similarly has the power to modify a facility's permit. *Id.* A requirement to "hot idle" certain coke oven batteries, which keeps the ovens hot but stops the production of coke, would cease operations on part of Clairton Coke Works in the event of violations. The Department has issued enforcement orders in the past requiring U.S. Steel to hot idle coke oven batteries at Clairton Coke Works in the event it is unable to comply. *See, e.g.* Attachment 12 – ACHD Air Quality Program Enforcement Order #180601, ¶81(d) (June 28, 2018) (requiring hot idle of the two worst performing batteries if U.S. Steel fails to meet requirements of the order). The suggestion that "hot idle" destroys batteries is a myth. In fact, U.S. Steel voluntarily hot idled coke oven batteries at Clairton Coke Works in 2009 due to market demand with no apparent damage.

Given Clairton Coke Works' long history of regular noncompliance with its permit, the Department should revise the Draft Permit to require U.S. Steel to hot idle coke oven batteries to ensure compliance in the event of noncompliance or a malfunction. The lengthy period of noncompliance as a result of the continued operation of the facility following the December 24, 2018 fire, which caused the shutdown of critical air pollution controls, and the accompanying ill health effects demonstrate the need to include a hot idle requirement in the Draft Permit. Requiring U.S. Steel to hot idle certain coke oven batteries necessary to achieve compliance will protect public health from dangerous levels of air pollution. Accordingly, the Department should include provisions in the Draft Permit requiring U.S. Steel to hot idle coke oven batteries in the event of noncompliance.

7. **The Department should correct the removal of hourly emissions limitations for sulfur dioxide (present in the 2012 permit) and make them more stringent, as appropriate.**

The Draft Permit removes hourly emissions limitations for sulfur dioxide that are contained in the 2012 permit. Among the regime of SO2 emission limitations currently implemented at Clairton, these hourly limitations are uniquely capable of protecting nearby communities from short-term spikes in SO2 emissions. The Department should determine appropriate hourly emissions limitations for these units (see comment above regarding how some information is out-of-date) and reinstate them into a revised Draft Permit.

The 2012 permit includes hourly (lb/hr) and annual (tons/year) SO2 emission limits for the battery stacks and boilers enumerated below. Clairton's SO2 SIP Installation Permit (Permit No. I017) imposes two additional limits for SO2 emissions from these emission points: a Thirty-day (30-day) Limit and a Supplementary 24-hr Limit. In its Draft Permit, the Department incorporates the Thirty-day (30-day) Emission Limit and Supplementary 24-hr Limit for each emission point; however, it eliminates all *hourly* emission limits for the batteries and boilers imposed by the 2012 permit.

The following tables show hourly emission limits for sulfur dioxide in the 2012 permit (highlighted) and tables showing the absence of such SO2 emissions limits in the Draft Permit (proposed SO2 limits highlighted)

1. Combustion stacks for batteries 1, 2, and 3

v. Emissions from each combustion stack for Coke Batteries No. 1, No. 2 or No. 3 shall not exceed the emission limitations in Table V-A-1. [§2105.21.f.2; §2105.21.h.4, §2103.12.e; §2101.11.b & c.]

TABLE V-A-1 - Emission Limitations for Batteries No. 1, No. 2, or No. 3 Combustion Stack (each stack)

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
PM	14.47	63.38
PM-10	14.47	63.38
$PM_{2.5}$	14.47	63.38
SO_2	31.8	139.46

[1]A year is defined as any consecutive 12-month period.

See page 49 of 2012 permit (Attachment 1).

u. Emissions from combustion stack for Coke Battery No. 1 shall not exceed the emission limitations in Table V-A-1 [§2105.21.f.2; §2105.21.h.4; §2103.12.e; §2101.11.b & c]

TABLE V-A-1 - Emission Limitations for Battery No. 1 Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)*	ANNUAL* EMISSION LIMIT (tons/year)[1]
PM	14.47	63.38
PM_{10}	13.60	59.57
$PM_{2.5}$	12.73	55.76
$PM_{condensible}$	3.46	15.17
NO_X	76.81	336.43
CO	40.94	179.32
VOC	2.17	9.50

[1]A year is defined as any consecutive 12-month period.
*NO_X, CO and VOC emissions include combustion stack, soaking, charging, door leaks, lid leaks, offtake leaks, decarbonization.

See page 53 of Draft Permit.

v. SO_2 emissions combustion stack coke oven battery 1 shall not exceed the limitations in Table V-A-1a below: [§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b]

TABLE V-A-1a – SO_2 Emission Limitations for Battery No. 1 Combustion Stack

Process	Thirty-day (30-day) Emission Limit* (lb/hr)	Supplementary 24-hr Limit** (lb/hr)[1]	Annual Emission Limit (tons/year)
Battery 1 Underfiring	10.41	13.27	45.60

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.
**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

See page 54 of Draft Permit.

w. Emissions from combustion stack for Coke Battery No. 2 shall not exceed the emission limitations in Table V-A-2 [§2105.21.f.2; §2105.21.h.4; §2103.12.e; §2101.11.b & c]

TABLE V-A-2 - Emission Limitations for Battery No. 2 Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)**	ANNUAL** EMISSION LIMIT (tons/year)[1]
PM	14.47	63.38
PM_{10}	13.60	59.57
$PM_{2.5}$	12.73	55.76
$PM_{condensible}$	4.64	20.34
NO_X	68.39	299.54
CO	40.67	178.14
VOC	2.08	9.09

[1]A year is defined as any consecutive 12-month period.
**NO_X, CO and VOC emissions include combustion stack, soaking, charging, door leaks, lid leaks, offtake leaks, decarbonization

See page 54 of Draft Permit.

x. SO_2 emissions combustion stack coke oven battery 2 shall not exceed the limitations in Table V-A-2a below: [§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b]

TABLE V-A-2a – SO_2 Emission Limitations for Battery No. 2 Combustion Stack

Process	Thirty-day (30-day) Emission Limit* (lb/hr)	Supplementary 24-hr Limit** (lb/hr)[1]	Annual Emission Limit (tons/year)[1]
Battery 2 Underfiring	9.15	11.66	40.08

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.
**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

See page 55 of Draft Permit.

y. Emissions from combustion stack for Coke Battery No. 3 shall not exceed the emission limitations in Table V-A-3 [§2105.21.f.2; §2105.21.h.4; §2103.12.e; §2101.11.b & c]

TABLE V-A-3 - Emission Limitations for Battery No. 3 Combustion Stack

POLLUTANT	HOURLY** EMISSION LIMIT (lb/hr)	ANNUAL** EMISSION LIMIT (tons/year)[1]
PM	14.47	63.38
PM_{10}	13.60	59.57
$PM_{2.5}$	12.73	55.76
$PM_{condensible}$	2.78	12.17
NO_X	71.15	311.64
CO	40.87	179.02
VOC	1.99	8.72

[1]A year is defined as any consecutive 12-month period.
**NO_X, CO and VOC emissions include combustion stack, soaking, charging, door leaks, lid leaks, offtake leaks, decarbonization

See page 55 of Draft Permit.

z. SO_2 emissions combustion stack coke oven battery 3 shall not exceed the limitations in Table V-A-3a below: [§§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b]

TABLE V-A-3a – SO_2 Emission Limitations for Battery No. 2 Combustion Stack

Process	Thirty-day (30-day) Emission Limit* (lb/hr)	Supplementary 24-hr Limit* (lb/hr)	Annual Emission Limit** (tons/year)
Battery 3 Underfiring	10.57	13.47	46.30

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

See page 56 of Draft Permit.

2. Combustion stacks for batteries 13, 14, and 15

v. Emissions from each combustion stack for Coke Batteries No. 13, No. 14 or No. 15 shall not exceed the emission limitations in Table V-C-1. [§2105.21.f.2, §2105.21.h.4 and, §2101.11.b & c].

TABLE V-C-1 - Emission Limitations for Battery No. 13, Battery No. 14, or Battery No. 15 Combustion Stack (each stack)

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year) [1]
PM	8.33	36.50
PM-10	8.33	36.50
PM-2.5	8.33	36.50
SO_2	33.5	146.5

[1] A year is defined as any consecutive 12-month period.

See page 80 of 2012 permit (Attachment 1).

v. Emissions from the combustion stack for Coke Battery No. 13 shall not exceed the emission limitations in Table V-C-1. [§2105.21.f.2, §2105.21.h.4, §2101.11.b & c].

TABLE V-C-1
Emission Limitations for Battery No. 13 Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)**	ANNUAL** EMISSION LIMIT (tons/year)*
PM	8.33	36.50
PM_{10}	7.16	31.39
$PM_{2.5}$	5.33	23.36
$PM_{condensible}$	2.97	13.0
NO_X	54.04	236.71
CO	38.38	168.08
VOC	1.80	7.86

*A year is defined as any consecutive 12-month period.
**NO_X, CO and VOC emissions include combustion stack, soaking, charging, door leaks, lid leaks, offtake leaks, decarbonization.

See page 86 of Draft Permit.

w. SO_2 emissions from Battery 13 shall not exceed the limitations in Table V-C-1a below: [§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b]

TABLE V-C-1a
SO_2 Emission Limitations for Battery No. 13 Combustion Stack

Process	Thirty-day (30-day) Emission Limit* (lb/hr)	Supplementary 24-hr Limit** (lb/hr)[1]	Annual Emission Limit (tons/year)[1]
Battery 13 Underfiring	13.93	15.70	61.03

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14 2017.

See page 87 of Draft Permit.

x. Emissions from the combustion stack for Coke Battery No. 14 shall not exceed the emission limitations in Table V-C-2. [§2105.21.f.2; §2105.21.E.4, §2101.11.b & c]

TABLE V-C-2
Emission Limitations for Battery No. 14 Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
PM	8.33	36.50
PM_{10}	7.16	31.39
$PM_{2.5}$	5.33	23.36
$PM_{condensible}$	2.20	9.64
NO_X	47.13	206.43
CO	45.29	198.38
VOC	1.78	7.80

[1]A year is defined as any consecutive 12-month period.
**NO_X, CO and VOC emissions include combustion stack, soaking, charging, door leaks, lid leaks, offtake leaks, decarbonization.

See page 87 of Draft Permit.

y. SO_2 emissions from Battery 14 shall not exceed the limitations in Table V-C-2a below: [§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b]

TABLE V-C-2a – SO_2 Emission Limitations
Battery No. 14 Combustion Stack

Process	Thirty-day (30-day) Emission Limit* (lb/hr)	Supplementary 24-hr Limit** (lb/hr)[1]	Annual Emission Limit (tons/year)[1]
Battery 14 Underfiring	14.03	15.80	61.45

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived byconverting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

See page 88 of Draft Permit.

z. Emissions from each combustion stack for Coke Battery No. 15 shall not exceed the emission limitations in Table V-C-3. [§2105.21.f.2; §2105.21.h.4, §2101.11.b & c].

TABLE V-C-3
Emission Limitations for Battery No. 15 Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
PM	8.33	36.50
PM_{10}	7.16	31.39
$PM_{2.5}$	5.33	23.36
$PM_{condensible}$	2.20	9.62
NO_{X}	58.54	256.41
CO	24.94	109.26
VOC	1.69	7.42

[1] A year is defined as any consecutive 12-month period.
**NO_{X}, CO and VOC emissions include combustion stack, soaking, charging, door leaks, lid leaks, offtake leaks, decarbonization

See page 88 of Draft Permit.

aa. SO_2 emissions from Battery 15 shall not exceed the limitations in Table V-C-3a below: [§2105.21.h; SO_2 SIP IP 0052-1017, Condition V.A.1.b]

TABLE V-C-3a – SO_2 Emission Limitations
Battery No. 15 Combustion Stack

Process	Thirty-day (30-day) Emission Limit* (lb/hr)	Supplementary 24-hr Limit** (lb/hr)[1]	Annual Emission Limit (tons/year)[1]
Battery 15 Underfiring	18.67	21.04	81.77

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.
**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

See page 89 of Draft Permit.

3. Combustion stack for battery 19

bb. Emissions from Coke Battery No.19 combustion stack shall not exceed the emission limitations in V-E-1. [§2105.21.f.2, §2105.21.h.4 and §2103.12.a.2.B]

TABLE V-E-1 - Emission Limitations for Battery No. 19 Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
PM	25.2	110.2
PM-10	25.2	110.2
$PM_{2.5}$	25.2	110.2
SO_2	61.53	269.48

[1] A year is defined as any consecutive 12-month period.

See page 112 of 2012 permit (Attachment 1).

bb. Emissions from Coke Battery No.19 combustion stack shall not exceed the emission limitations in V-E-1. [§2105.21.f.2, §2105.21.h.4; §2103.12.a.2.B]

TABLE V-E-1 - Emission Limitations for Battery No. 19 Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL** EMISSION LIMIT (tons/year)*
PM	25.2	110.2
PM_{10}	22.28	97.42
$PM_{2.5}$	21.34	92.24
NO_X	272.97	1195.62
CO	135.87	595.13
VOC	3.83	16.76

*A year is defined as any consecutive 12-month period.
**NOx, CO and VOC emissions include combustion stack, soaking, charging, door leaks, lid leaks, offtake leaks, decarbonization

See page 121 of Draft Permit.

dd. SO_2 emissions from Batteries No.19 & 20 combustion stack shall not exceed the limitations in Table V-E-3 below: [§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b]

TABLE V-E-3 – SO_2 Emission Limitations for Batteries No. 19, & No.20 Combustion Stack

Process	Thirty-day (30-day) Emission Limit* (lb/hr)	Supplementary 24-hr Emission Limit** (lb/hr)†	Annual Emission Limit (tons/year)†
Battery 19 Underfiring	29.37	33.09	128.64
Battery 20 Underfiring	27.00	30.42	118.26

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

See page 122 of Draft Permit.

4. Combustion stack for battery 20

cc. Emissions from Coke Battery No.20 combustion stack shall not exceed the emission limitations in Table V-E-2. [§2105.21.f.1, §2105.21.h.4 and §2103.12.a.2.B]

TABLE V-E-2 - Emission Limitations for Battery No. 20 Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
PM	13.4	58.5
PM-10	13.4	58.5
$PM_{2.5}$	13.4	58.5
SO_2	61.5	269.52

*A year is defined as any consecutive 12-month period.

See page 112 of 2012 permit (Attachment 1).

cc. Emissions from Coke Battery No.20 combustion stack shall not exceed the emission limitations in Table V-E-2. [§2105.21.f.1, §2105.21.h.4; §2103.12.a.2.B]

TABLE V-E-2 - Emission Limitations for Battery No. 20 Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
PM	13.4	58.5
PM_{10}	13.4	58.5
$PM_{2.5}$	13.4	58.5
NO_X	272.97	1195.62
CO	135.87	595.12
VOC	3.82	16.74
Benzene	0.51	2.23
Hexane	0.35	1.52
H_2S	2.26	9.90
Ammonia	1.31	5.73
HCL	3.08	13.49

*A year is defined as any consecutive 12-month period.
**NO_X, CO and VOC emissions include combustion stack, soaking, charging, door leaks, lid leaks, offtake leaks, decarbonization

See page 122 of Draft Permit.

dd. SO_2 emissions from Batteries No.19 & 20 combustion stack shall not exceed the limitations in Table V-E-3 below: [§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b]

TABLE V-E-3 – SO_2 Emission Limitations for Batteries No. 19, & No.20 Combustion Stack

Process	Thirty-day (30-day) Emission Limit* (lb/hr)	Supplementary 24-hr Emission Limit** (lb/hr)[1]	Annual Emission Limit (tons/year)[1]
Battery 19 Underfiring	29.37	33.09	128.64
Battery 20 Underfiring	27.00	30.42	118.26

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.
**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

See page 122 of Draft Permit.

5. Combustion stack for battery B

v. Emissions from Coke Battery B combustion stack shall not exceed the emission limitations in Table V-I-1. [§§2105.21.f.2, §2105.21.h.4 and §2103.12.a.2.B]) .

Table V-G-1 - Emission Limitations for Battery B Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
PM	12.40	54.33
PM-10	12.40	54.33
$PM_{2.5}$	12.40	54.33
SO_2	91.5	400.95

A year is defined as any consecutive 12-month period.

See page 143 of 2012 permit (Attachment 1).

v. Emissions from Coke Battery B combustion stack shall not exceed the emission limitations in Table V-G-1. [§2105.21.b.2; §2105.21.b.4; §2103.12.a.2.B]

Table V-G-1 - Emission Limitations for Battery B Combustion Stack

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
PM	12.40	54.33
PM_{10}	11.66	51.07
$PM_{2.5}$	10.91	47.81
NO_X	175.58	768.94
CO	219.21	961.47
VOC	3.77	16.51

[1]A year is defined as any consecutive 12-month period.
*NO_X, CO and VOC emissions include combustion stack, soaking, charging, door leaks, lid leaks, offtake leaks, decarbonization.

See page 155 of Draft Permit.

w. SO_2 emissions from Battery B combustion stack shall not exceed the limitations in Table V-G-2 below: [§2102.04.b.6; §2105.21.h]

TABLE V-G-2 – SO_2 Emission Limitations for Battery B Combustion Stack

Process	Thirty-day (30-day) Emission Limit* (lb/hr)	Supplementary 24-hr Emission Limit** (lb/hr)[1]	Annual Emission Limit (tons/year)[1]
Battery B Underfiring	21.38	27.26	93.64

[1]A year is defined as any consecutive 12-month period.
*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.
**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

See page 156 of Draft Permit.

6. Boiler B001

j. Emissions Limitations: Emissions from Boiler B001 shall not exceed the limits listed in Table V-AA-1 at any time: [§2105.06.b.5; §2105.03]

TABLE V-AA-1: Boiler 1 Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
Particulate Matter	15.20	66.58
PM-10	15.20	66.58
NO_X	410.40	1,740
SO_2	163.50[2]	716.11[2]

[1]A year is defined as any consecutive 12-month period.
[2]County-only enforceable. (§2103.22.d.)

See page 242 of 2012 permit (Attachment 1).

h. **Emissions Limitations:** Emissions from Boiler B001 shall not exceed the limits listed in Table V-GG-1 at any time: [§2105.06.b.5; §2105.03; RACT IP 0052-I020b, Condition V.A.1.b; SO_2 SIP IP 0052-I017, Condition V.A.1.b]

TABLE V-GG-1 – Boiler 1 Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
Particulate Matter	15.20	66.58
PM_{10}	15.20	66.58
NO_X	364.80*	1,598
CO	59.90	262.19
VOC	0.69	3.01
Ammonia	2.28	9.99
Hexane	1.28	5.62
HCL	6.69	29.30

[1]A year is defined as any consecutive 12-month period.
*Based on a 30-day rolling average.

i. The permittee shall comply with the SO_2 emissions in condition IV.32.f [§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b

See page 334 of Draft Permit.

f. **SO2 emissions from B001, B002, B005, B006, B007, and B008 shall not exceed the following limitations (SO2 SIP IP 0052-I017, Condition V.A.1.b):**

SO_2 Emission Limitations for the Boilers

30 day rolling*** average limit (lb/hr)*	Supplementary*** 24-hr Limit* (lb/hr)	Tons/year**
118.44	134.06	518.77

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

***Emission limits are on an aggregate basis

See page 49 of Draft Permit, Condition IV.32.f.

7. Boiler No. 2

k. **Emissions Limitations:** Emissions from Boiler No. 2 (B002) shall not exceed the limits listed in Table V-FF-1 at any time: [§2105.06.b.5; §2105.03]

TABLE V-BB-1
B002 Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	9.62	42.14
PM-10	9.62	42.14
NO_X	259.74	1285.0
SO_2	103.48[2]	453.22[2]

[1]A year is defined as any consecutive 12-month period.
[2]County-only enforceable. (§2103.22.d.)

See page 245 of 2012 permit (Attachment 1).

i. **Emissions Limitations:** Emissions from Boiler No. 2 (B002) shall not exceed the limits listed in Table V-HH-1 at any time: [§2105.06.b.5; §2105.03; RACT IP 0052-I020b, Condition V.A.1.b]

TABLE V-HH-1
B002 Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
Particulate Matter	9.62	42.14
PM_{10}	9.62	42.14
NO_x	177.97*	780
CO	37.89	165.94
VOC	0.21	0.93
Ammonia	1.44	6.33
Hexane	0.81	3.56
HCL	4.23	18.55

[1]A year is defined as any consecutive 12-month period.
* Based on a 30-day rolling average

j. The permittee shall comply with the SO_2 emissions in condition IV.32.f [§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b

See page 338 of Draft Permit.

f. **SO2 emissions from B001, B002, B005, B006, B007, and B008 shall not exceed the following limitations (SO2 SIP IP 0052-I017, Condition V.A.1.b):**

SO_2 Emission Limitations for the Boilers.

30 day rolling*** average limit (lb/hr)*	Supplementary*** 24-hr Limit* (lb/hr)	Tons/year**
118.44	134.06	518.77

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

***Emission limits are on an aggregate basis

See page 49 of Draft Permit, Condition IV.32.f.

8. Boiler R1 and Boiler R2

h. **Emissions Limitations:** Emissions from each boiler (Boiler R1 and Boiler R2) shall not exceed the limits listed in Table V-CC-1 at any time: [§2105.06.b; §2105.03]

TABLE V-CC-1
Emission Limitations for Boiler R1 or Boiler R2 (B005 or B006)

POLLUTANT	HOURLY EMISSION LIMIT Per Boiler (lb/hr)	ANNUAL EMISSION LIMIT Per Boiler (tons/year)[1,2]
Particulate Matter	4.58	20.06
PM-10	4.58	20.06
NO_x	123.66	525.0
SO_2	49.26[3]	215.78[3]

[1]A year is defined as any consecutive 12-month period.
[2]County-only enforceable. (§2103.22.d.)

See page 248 of 2012 permit (Attachment 1).

g. **Emissions Limitations:** Emissions from each boiler (Boiler R1 and Boiler R2) shall not exceed the limits listed in Table V-H-1 at any time. [RACT IP 0052-I020b, Condition V.B.1.b; 25 Pa Code §129.99; §2102.04.b.5; §2105.06.d]

TABLE V-H-1
Emission Limitations for Boiler R1 or Boiler R2 (B005 or B006)

POLLUTANT	HOURLY EMISSION LIMIT Per Boiler (lb/hr)	ANNUAL EMISSION LIMIT Per Boiler (tons/year)[1]
Particulate Matter	4.58	20.06
PM_{10}	4.58	20.06
NO_X	70.99	310.94
CO	48.49	212.01
VOC	0.10	0.44
Ammonia	0.69	3.01
Hexane	0.39	1.69
HCL	2.07	9.08

[1]A year is defined as any consecutive 12-month period.

h. The permittee shall comply with the SO_2 emissions in condition IV.32.f [§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b]

See page 343 of Draft Permit.

f. SO2 emissions from B001, B002, B005, B006, B007, and B008 shall not exceed the following limitations (SO2 SIP IP 0052-I017, Condition V.A.1.b):

SO_2 Emission Limitations for the Boilers.

30 day rolling*** average limit (lb/hr)*	Supplementary*** 24-hr Limit* (lb/hr)	Tons/year**
118.44	134.06	518.77

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

***Emission limits are on an aggregate basis

See page 49 of Draft Permit, Condition IV.32.f.

9. Boiler T1 and Boiler T2

i. Emissions from Boiler T1 or Boiler T2 (B007 or B008) shall not exceed the limits listed in Table V-DD-1 at any time: [§2105.03]

TABLE V-DD-1 - Emission Limitation for Boilers T1 or T2

POLLUTANT	HOURLY EMISSION LIMIT Per Boiler (lb/hr)	ANNUAL EMISSION LIMIT Per Boiler (tons/year)*
Particulate Matter	3.12	13.67
PM-10	3.12	13.67
NO_X	84.24	358
SO_2	33.56	146.99

*A year is defined as any consecutive 12-month period.

See page 251 of 2012 permit (Attachment 1).

h. Emissions from Boiler T1 or Boiler T2 (B007 or B008) shall not exceed the limits listed in Table V-JJ-1 at any time: [RACT IP 0052-I020b, Condition V.C.1.b; 25 Pa Code §129.99; §2102.04.b.5; §2105.06.d; §2105.03]

TABLE V-JJ-1 - Emission Limitation for Boilers T1 or T2

POLLUTANT	HOURLY EMISSION LIMIT Per Boiler (lb/hr)	ANNUAL EMISSION LIMIT Per Boiler (tons/year)*
Particulate Matter	3.12	13.67
PM_{10}	3.12	13.67
NO_X	48.36	211.82
CO	12.90	53.82
VOC	0.07	0.30
Ammonia	0.47	2.05
Hexane	0.26	1.15
HCL	1.37	6.01

*A year is defined as any consecutive 12-month period.

i. The permittee shall comply with the SO_2 emissions in condition IV.32.f [§2105.21.h; SO_2 SIP IP 0052-I017, Condition V.A.1.b

See page 346 of Draft Permit.

f. SO2 emissions from B001, B002, B005, B006, B007, and B008 shall not exceed the following limitations (SO2 SIP IP 0052-I017, Condition V.A.1.b):

SO_2 Emission Limitations for the Boilers.

30 day rolling*** average limit (lb/hr)*	Supplementary*** 24-hr Limit* (lb/hr)	Tons/year**
118.44	134.06	518.77

*Limits are based on a rolling 30-day average of 24-hour (calendar day) averages, with an additional restriction of no more than 3 consecutive days above a supplementary 24-hour limit. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

**Tons/year value is used to demonstrate the expected tons/year from this unit. The value is derived by converting the 30-day rolling average limit lb/hr to an annual tons per year value. These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

***Emission limits are on an aggregate basis

See page 49 of Draft Permit, Condition IV.32.f.

For the boilers (as opposed to battery stacks), the Draft Permit eliminates both the hourly AND annual per-boiler SO2 emission limits in the 2012 Permit. The Department should put the annual per-boiler SO2 emission limits back into the Draft Permit and make them more stringent as appropriate.

As ACHD itself acknowledged in its pending federal Clean Air Act enforcement suit against U.S. Steel, the two additional types of SO2 emission limits implemented by the SO2 SIP Installation Permit – and carried over, alone, into the Draft Permit – did not "revise" or supplant the hourly limits in the 2012 permit. *See PennEnvironment et al. v. U.S. Steel*, 19-cv-00484, Joint Reply Brief in Support of Plaintiffs' Motion for Partial Summary Judgment as to Liability, ECF 140 at 10-12; *see also* SO2 SIP Installation Permit § III.18 (stipulating that compliance with requirements of the permit "shall not in any manner relieve any person from the duty to fully comply with any other applicable federal, state, or county state, rule, regulation, or the like…"); Article XX1, § 2103.10.b3 (provides under "Subpart 1 – Operating Permits (All Major & Minor Permits)" that "[i]t shall be a violation…for any person to fail to comply with any terms or conditions set forth in any permit issued pursuant to this Subpart.").

Rather, the two SO2 emission limits currently included in the Draft Permit are clearly intended to work in *conjunction* with the hourly limits from the 2012 permit. Although all three types of emission limits are expressed in terms of lb/hour, only the limits from the 2012 permit actually regulate emissions over the course of each hour. The emission limits included in the Draft Permit regulate emissions over much longer periods of 30 days (Thirty Day Limit based on a rolling 30-day average) and three days (Supplementary 24-hour Limit that applies over any consecutive 3 day calendar period). Although these limits are "lower" than corresponding hourly limits from the 2012 permit when expressed simply in terms of lb/hour, they apply over longer periods (30 days and 3 days, as opposed to one hour) and thus may not capture even dramatic short-term spikes in SO2 emissions. And this has played out in practice: during the 16-hour desulfurization plant outage on June 17, 2019, various one-hour SO2 limits were violated while the longer term limits were not. *See, e.g. PennEnvironment et al. v. U.S. Steel*, 19-cv-00484, ECF 107-16 at 18 (Table 3A, depicting exceedances of only the hourly SO2 limit at Batteries 13, 14, 15, 19, 20 and C on June 17, 2019).

That the Thirty-day Emission Limits and Supplementary 24-hour Limits serve purposes distinct from the hourly limits contained in the 2012 permit, and are not simply more stringent revisions, is supported by the language of ACHD's SO2 State Implementation Plan (SIP), through which they were implemented:

> The use of longer-term averaging is appropriate for specific sources in this SIP that are subject to fuel-based variability. 30-day average limits must be met for all rolling 30-day periods, with a supplemental condition that no three consecutive days can exceed the 24-hour limit. These limits *would ensure that prolonged periods of elevated emissions are not occurring during potentially unfavorable periods of meteorology*. The three consecutive-day 24-hour supplementary limit *condition is also consistent with the NAAQS in that three exceedance days in a year would increase the likelihood of a monitored 99th percentile above the NAAQS*.

See ACHD SO2 SIP, Appendix D, Section D-4 at 45 ("Conclusions") (emphasis added), available at https://www.regulations.gov/document/EPA-R03-OAR-2017-0730-0002.

In summary, the Department should carry over the 2012 permit's hourly SO2 emissions limits in the Draft Permit, and make them more stringent as necessary (see comment above about out-of-date information in the application).

8. <u>The Department should revise the Draft Permit to include additional provisions to reduce the exposure of the community to harmful emissions from the facility</u>.

a. <u>The Department should require the applicant to explore opportunities for using something other than a highly toxic gas (coke oven gas) as a "control device" and blanketing agent in flat-roofed tanks.</u>

Presently, the Department requires the Facility to use coke oven gas as a blanketing agent in tanks for the byproduct recovery unit. This is a dangerous practice that utilizes a toxic and combustible gas to control VOC emissions. The Department and the Company should explore alternative means to control VOC emissions from these byproduct tanks.

At the very least, the Department should require a more robust leak detection and repair program to ensure that the COG from these tanks is not being emitted directly to the atmosphere in violation of the terms of the permit. This could, in part, be addressed with fenceline monitoring as outlined in comment 8.d below.

b. The Department should explain why SO2 emissions are increasing despite the installation of control technology for the Vacuum Carbonate Unit upgrade.

The calculated hourly limit for SO2 for the SCOT Desulfurization plant in the application in 2016 is lower than the calculated hourly limit in both the Title V review memo and SO2 SIP IP17 (6.46 lb/hr vs 24 lb/hr). While revised emissions limitations for the new VCU are included in the Draft Permit, SO2 hourly emissions are increasing overall. It is unclear why this is the case given the supposed increased level of control from the installation of the VCU. This increase represents a sizable potential annual increase of more than 75 tons of SO2. The Department should explain why SO2 emissions are increasing despite the installation of control technology.

c. COG emission factors for certain HAPs were incorrectly based on the MSDS weight % for COG

Coke oven gas emission factors, specifically for the HAPs toluene, propylene, and ethylene at the desulfurization plant were based on the weight percentage from a 1997 Material Safety Data Sheet (MSDS) for coke oven gas. *See* Attachment 43 – 2016 Application, pdf pages 563, 568 (references to MSDS for Coke Oven Gas). Commenters do not believe that this is an appropriate source for estimating HAP emissions. This specific MSDS was out of date at the time of the application (the MSDS was revised in 2010) and is out of date now, as it was revised again in 2020 (*See* Attachment 44 – United States Steel Corporation, Raw Coke Oven Gas Safety Data Sheet (SDS), rev. 12/20, https://www.ussteel.com/documents/40705/43680/Raw+Coke+Oven+Gas+SDS.pdf/6bd86dd1-c7b9-9e57-3c1b-c67d870bf0d3?t=1612459967401).

The use of an MSDS in this way is puzzling given that the facility could physically test the concentration of these pollutants by taking a sample of its Coke Oven Gas instead of using a general weight percentage from a data sheet intended for worker safety. Sampling for other pollutants at the SCOT plant is done using a stack source test. The same could be done for these pollutants. Alternatively, a Coke Oven Gas sample should be sent to a laboratory to verify the weight percentage of HAPs emitted from the SCOT plant.

d. The Department should correct a typo in the Title V emission limit for coal tar loading and not use rounding in performing subtotals, which can throw off calculations.

The review memorandum for installation permit I015 states that VOC potential emissions from coal tar loading are 1.39 lbs/hr and 6.07 tons/yr. *See* Attachment 45 -- Clairton IP 0052-I015 Technical Support Document, March 1, 2017, page 9). But the installation permit lists VOC potential emissions as 1.39 lbs/hr and 60.7 tons/yr. *See* Attachment 46 -- Clairton IP 0052-

I015, March 1, 2017, page 33. Since 1.39 lbs/hr x 4.38 hr-ton/lb-year = 6.07 tons/yr, there was clearly a typographical error in the installation permit. This error was repeated on page 331 of the Draft Permit. The Department should correct this error.

There is also a slight error in the Title V review memo stating incorrectly that IP015 modifies only process p044c when in fact it should modify p044c and p044d, both the storage tank working losses (044c) and crude tar truck/rail loading (044d) are modified. The emission limit typo occurs in the modification of crude tar truck/rail loading (044d) emissions limits.

In installation permits I015 and I016 (and possibly the Title V permit), it appears that the Department has been incorrectly rounding during subtotaling at various points in calculations. This can cause the hourly emissions limitation to not equal the tons per year emissions limitation when multiplied by 8760 hr/yr * 1 ton/2000 lbs (or using a ratio of 4.38 hr-ton/lb-year). Note that the units where these errors are present are permitted to operate at 8760 hr/yr so there is most likely no other explanation of this discrepancy other than rounding error.

e. The Department should require fenceline monitoring for benzene and hydrogen sulfide emissions.

The Department should revise the Draft Permit to require U.S. Steel to install air pollution monitors at the perimeter of the Facility to measure benzene and hydrogen sulfide emissions that impact the community and to ensure compliance with the facility-wide emissions limitations for benzene, hydrogen sulfide, and other pollutants.

Benzene is a well-known carcinogen that contributes to cancer of the blood cells (leukemia) and respiratory ailments, and high concentrations indicate the presence of other air pollutants dangerous to human health.[1] Hydrogen sulfide is also a well-known dangerous pollutant. Exposure to hydrogen sulfide may cause irritation to the eyes and respiratory system. It can also cause apnea, coma, convulsions; dizziness and headache.[2] As discussed in detail in the Background section to these comments, the Facility is a significant source of coke oven emissions, including benzene, hydrogen sulfide (especially in light of the Department's March 2022 report on emissions of hydrogen sulfide from the plant), and other toxic air pollutants.

Fenceline monitoring programs at other industrial facilities like refineries and chemical plants have been successful in identifying otherwise hidden emissions and alerting plant operators to benzene concentrations at property boundaries that pose a health risk to nearby

---

[1] Benzene; CASRN 71-43-2," Chemical Assessment Study, Integrated Risk Information System, National Center for Environmental Assessment, US Environmental Protection Agency, Section II.C.2, p. 33, available at https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0276_summary.pdf#nameddest=cancerinhal.

[2] Hydrogen Sulfide, The National Institute for Occupational Safety and Health (NIOSH), available at https://www.cdc.gov/niosh/topics/hydrogensulfide/default.html#:~:text=Exposure%20to%20hydrogen%20sulfide%20may,from%20exposure%20to%20hydrogen%20sulfide (last accessed 03/14/2022).

communities.[3] For example, EPA adopted Clean Air Act regulations in 2015 that require refineries to measure the average benzene concentration at multiple locations around the perimeter of the plant. 40 C.F.R. § 63.658. If the net benzene level exceeds EPA's action level,[4] the rule requires the facility to investigate and take action to reduce pollution. *Id.* Environmental Integrity Project's most recent analysis of this monitoring data identified twelve refineries and two chemical plants where annual benzene concentrations exceeded the federal action level as of June 30, 2021.

In addition, EPA has routinely required facilities to implement a fenceline monitoring program at industrial facilities to address violations of the Clean Air Act. *See* Consent Decree, *U.S. and Louisiana Department of Environmental Quality v. Shell Chemical LP* (No. 2:18-cv-1404-EEF-JVM, E.D. La., Feb. 12, 2018) available at https://www.epa.gov/sites/default/files/2018-02/documents/shellchemicallp021218-cd.pdf; Consent Decree, *U.S. and Louisiana Department of Environmental Quality v. ExxonMobil Corp and ExxonMobil Oil Corp* (No. 4:17-cv-3302, S.D.Tex., Oct. 31, 2017) available at https://www.justice.gov/opa/press-release/file/1007591/download; Consent Decree, *U.S. v. Sunoco, Inc.* (No.05-02866, E.D. Pa., Aug. 17, 2012) available at https://www.epa.gov/sites/default/files/documents/fourthamendedsunoco-cd.pdf. There is also an example of a local fenceline monitoring settlement agreement at a chemical manufacturer in Beaver County, implemented at the Shell Pennsylvania Petrochemicals Complex. *See* Settlement Agreement Between Shell Chemical Appalachia LLC and Clean Air Council and Environmental Integrity Project, August 25, 2017, available at https://environmentalintegrity.org/wp-content/uploads/2017/02/2017.08.25-Shell-Settlement-Agreement.pdf).

Fenceline monitoring requirements are similarly appropriate here because the facility is a significant source of benzene, hydrogen sulfide, and other toxic emissions and regularly violates the Clean Air Act. *See* Background to the Comments. Federal regulations and case law have made clear that a permitting authority may supplement monitoring and testing requirements in a Title V permit.[5] 40 C.F.R. §70.6(a)(3)(i)(B); *see Sierra Club,* 536 F.3d 673, 675-76 (D.C. Cir. 2008) (citing approvingly two EPA rulings finding that federal regulations require "state and local permitting authorities to supplement inadequate monitoring requirements"). In addition, as discussed below, the Department may—and should here—go beyond minimum requirements when making permitting decisions for this Facility under Title V of the Clean Air Act. Thus, the Department has the authority to include conditions requiring fenceline monitoring for benzene and should revise the Draft Permit to include such conditions.

---

[3] *See, e.g.*, Envtl. Integrity Project, Environmental Justice and Refinery Pollution: Benzene Monitoring Around Oil Refineries Showed More Communities at Risk in 2020 (Apr. 28, 2021), available at https://environmentalintegrity.org/wp-content/uploads/2021/04/Benzene-report-4.28.21.pdf.

[4] The action level is an exceedance of 9 micrograms per cubic meter of air over a one-year period. 40 C.F.R. § 63.658.

[5] In some cases, a permitting agency is required to supplement monitoring requirements in a Title V permit.

9. **The Department Should Revise the Proposed Regulations to Require a Meaningful Work Practice Plan to Facilitate Emissions Reductions at the Clairton Coke Works.**

The county should revise the Draft Permit to improve the work practice standards that are required to address fugitive emissions from the batteries. This relates to the work practice plan required under the battery NESHAP – an "applicable requirement." Because of the nature of fugitive emissions associated with coke oven batteries, there are a number of potential areas for emissions reduction.

There are two bases for legal authority for adopting such requirements. The first is the Department's authority to adopt requirements in addition to "applicable requirements" in the Draft Permit. As discussed in a comment below, the applicant erroneously asserts that the Department may not do this. The second is the Department's authority to adopt monitoring requirements to assure compliance with "applicable requirements." Emissions limitations for leaking doors, lids, and offtakes come from the battery NESHAP, an "applicable requirement."

While the Draft Permit includes requirements relating to the work practice plan requirement, they carry over provisions from the 2012 permit and the applicant has regularly violated the law with respect to leaking doors, lids, and offtakes, despite its preparation of a work practice plan in 1993. While the applicant prepared a work practice plan in 1993, that plan is obviously insufficient. *See* Attachment 47 -- U.S. Steel, NESHAPS Work Practices Plan, dated November 12, 1993 (for batteries 1, 2, 3, 7, 8, 9, 13, 14, 15, 19, and 20), NESHAPS Work Practices Plan, dated November 12, 1993 (battery B) (There were actually two plans, one for all the batteries except for battery B, and one for battery B).

The Department should revise the Draft Permit to strengthen the plan with respect to the federal regulations, and impose additional requirements where the federal regulations do not go far enough to regulate emissions. This should include the identification of criteria and standards for the repair and replacement of leaking equipment.

The work practice plan should not be treated solely as an internal company document, like an employee handbook.

More frequent maintenance and repair that is backed by more stringent requirements in the Draft Permit will lead to lower emissions and fewer violations due to leaks.

a. <u>While the federal regulations set forth requirements for the preparation of a work practice plan in 1993, there are limitations in those regulations that could be cured by the Department in the Draft Permit.</u>

Under the battery NESHAP in 1993, the company was required to prepare a written emission control work practice plan to address visible emission limitations for coke oven doors, topside port lids, offtake systems, and charging operations:

> § 63.306 Work practice standards.
>
> (a) Work practice plan. ***On or before November 15, 1993, each owner or operator shall prepare and submit a written emission***

control work practice plan for each coke oven battery. The plan shall be designed to achieve compliance with visible emission limitations for coke oven doors, topside port lids, offtake systems, and charging operations under this subpart, or, for a coke oven battery not subject to visible emission limitations under this subpart, other federally enforceable visible emission limitations for these emission points.

(1) ***The work practice plan must address each of the topics specified in paragraph (b) of this section*** in sufficient detail and with sufficient specificity to allow the reviewing authority to evaluate the plan for completeness and enforceability.

40 C.F.R. 63.306(a)(1) (bold italics added for emphasis), https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol11/pdf/CFR-2019-title40-vol11-part63-subpartL.pdf;

The following topics had to be addressed in this work practice plan:

(2) Procedures for controlling emissions from coke oven doors on by-product coke oven batteries, ***including***:

(i) ***A program for the inspection, adjustment, repair, and replacement of coke oven doors and jambs, and any other equipment for controlling emissions from coke oven doors***, including a defined frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, ***and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances***;

(ii) ***Procedures for identifying leaks that indicate a failure of the emissions control equipment to function properly***, including a clearly defined chain of command for communicating information on leaks and procedures for corrective action;

(iii) ***Procedures for cleaning all sealing surfaces of each door and jamb***, including identification of the equipment that will be used and a specified schedule or frequency for the cleaning of sealing surfaces;

(iv) ***For batteries equipped with self-sealing doors, procedures for use of supplemental gasketing and luting materials***, if the owner or operator elects to use such procedures as part of the program to prevent exceedances;

(v) ***For batteries equipped with hand-luted doors, procedures for luting and reluting***, as necessary to prevent exceedances;

(vi) Procedures for maintaining an ***adequate inventory of the number of spare coke oven doors and jambs located onsite***; and

(vii) ***Procedures for monitoring and controlling collecting main back pressure***, including corrective action if pressure control problems occur.

Id., 40 C.F.R. 63.306(b)(2) (bold italics added for emphasis).

For charging operations, the work practice plan was supposed to address the following topics:

(3) ***Procedures for controlling emissions from charging operations on by-product coke oven batteries***, including:

(i) Procedures for equipment inspection, including the frequency of inspections, ***and replacement or repair of equipment for controlling emissions from charging***, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;

(ii) Procedures for ensuring that ***the larry car hoppers are filled properly with coal***;

(iii) Procedures for ***the alignment of the larry car over the oven to be charged***;

(iv) Procedures for filling the oven (***e.g., procedures for staged or sequential charging***);

(v) Procedures for ensuring that ***the coal is leveled properly in the oven***; and

(vi) ***Procedures and schedules for inspection and cleaning of offtake systems*** (including standpipes, standpipe caps, goosenecks, dampers, and mains), oven roofs, charging holes, topside port lids, the steam supply system, and liquor sprays.

Id., 40 C.F.R. 63.306(b)(3) (bold italics added for emphasis).

For topside port lids, the work practice plan was supposed to address the following topics:

(4) Procedures for controlling emissions from topside port lids on by-product coke oven batteries, ***including***:

(i) ***Procedures for equipment inspection and replacement or repair of topside port lids and port lid mating and sealing surfaces***, including the frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances; and

(ii) ***Procedures for sealing topside port lids after charging, for identifying topside port lids that leak, and procedures for resealing***.

Id., 40 C.F.R. 63.306(b)(4) (bold italics added for emphasis).

For offtake systems, the work practice plan was supposed to address the following topics:

(5) Procedures for controlling emissions from offtake system(s) on by-product coke oven batteries, ***including***:

(i) ***Procedures for equipment inspection and replacement or repair of offtake system components***, including the frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;

(ii) ***Procedures for identifying offtake system components that leak and procedures for sealing leaks that are detected***; and

(iii) ***Procedures for dampering off ovens prior to a push***.

Id., 40 C.F.R. 63.306(b)(4) (bold italics added for emphasis).

For all these emissions points, the facility was supposed to maintain a daily record of the performance of plan requirements:

(7) Procedures for maintaining, for each emission point subject to visible emission limitations under this subpart, ***a daily record of the performance of plan requirements pertaining to the daily operation of the coke oven battery and its emission control equipment***, including:

(i) ***Procedures for recording the performance of such plan requirements***; and

(ii) Procedures for certifying the accuracy of such records by the owner or operator.

Id., 40 C.F.R. 63.306(b)(7) (bold italics added for emphasis).

There are several limitations that inhibit the effectiveness of the regulations. First, while there are provisions for implementing the work practice plan under the federal regulations, the regulations might be construed to limit this to certain circumstances tied to exceedances of emissions limitations. *See id.,* 40 C.F.R. 63.306(c) ("Implement the provisions of the work practice plan pertaining to a particular emission point following the second independent exceedance of the visible emission limitation for the emission point in any consecutive 6-month period ….").

Second, while there are provisions for reviewing and revising the work practice plan under the federal regulations, the regulations might be construed to limit this to certain circumstances tied to exceedances of emissions limitations. *See id.,* 40 C.F.R. 63.306(d)(1) ("The reviewing authority may request the owner or operator to review and revise as needed the work practice emission control plan for a particular emission point if there are 2 exceedances of the applicable visible emission limitation in the 6-month period that starts 30 days after the owner or operator is required to implement work practices under paragraph (c) of this section").

The Department maintains the authority to expand upon these requirements in its own regulations. Nothing in the federal law or regulations preempts the Department from requiring a meaningful work practice plan and work practice standards in the Draft Permit.

b. <u>For door areas, the work practices plan does not specify standards or criteria for repair or replacement, or for corrective action.</u>

Although the work practices plan provides for mechanical steps for repair and replacement, it does not specify standards or criteria for repair or replacement, or for corrective action. *See id.,* NESHAPS Work Practices Plan, dated November 12, 1993 (for batteries 1, 2, 3, 7, 8, 9, 13, 14, 15, 19, and 20), pages 7-15.[6] Therefore, it is a weak plan that could be improved by the Department through regulation.

The plan provides for inspections of doors. *See id.,* Section I.A.1, page 7 ("Oven doors and jambs are to be inspected for defects which may cause problems with the door sealing system."). However, the inspection is limited to "visible defects." *See id.,* Section I.A.1.c, page 7 ("Visible defects are to be brought to the attention of the first line supervisor …."). Therefore, this does not address problems of excess fugitive emissions from defects that are not visible.

One would think this would be covered by language in the plan that cites "poor performance" as a second reason for identifying a problem door or jamb:

[6] For purposes of illustration for the rest of this comment, Commenters will cite provisions of the plan relating to all the batteries but battery B, which technically is subject to a separate plan. But similar concerns apply to that plan, as well.

> ***A problem door or jamb*** which has been ***identified by either poor performance or a report of a visible defect is to be inspected more-thoroughly*** by the first line supervisor or Door Coordinator. This inspection may include taking physical measurements to determine the remedial action required.

See id., Section I.A.3.b, page 8 (bold italics added for emphasis). However, the plan does not define "poor performance," or provide an indication of what this phrase means.

The provisions for door replacement do not set forth criteria or standards for determining whether doors need to be repaired or replaced. *See id.,* Section I.B.1, page 8 ("The first line supervisor, with the help of the Door Coordinator, is to determine which doors are to be taken out of service."). The plan sets forth several mechanical steps for repair and replacement. *See id.,* pages 8-9 ("Door reconditioning at CDR ranges from patching of refractory to a total rebuild of the door."). But it does not specify the criteria or standards for when a particular step should be taken.

Similarly, the procedures for jamb inspection, replacement, and repair are mechanical in nature, and do not set forth any standards or criteria for taking particular steps. *See id.,* Section I.B.3, page 9 ("Jamb repair may involve welding, repositioning of the jamb or replacement of the jamb casting (door frame)."). While the plan states that problems might be identified through "routine inspections" or "trouble shooting," this says nothing about when repair or replacement is required. *See id.,* Section I.B.3.1, page 9. Rather, this is apparently left to operators. *See id.,* Section I.B.3.2, I.B.3.3, page 9.

This is also the case with inspection of automatic cleaning systems. Following the "reporting [of] any problems associated with the automatic cleaning equipment," the plan states that the Maintenance Manager or teamleader "will take appropriate corrective action." *See id.,* Section I.C.2, page 10. This begs the question what is "corrective action."

For recently charged ovens, operators are required to inspect and report "door leakage which is considered excessive. (not expected to stop within a normal time period for self sealing doors)." *See id.,* Section I.D.1, page 11. But it does not set forth what is a "normal time." *See id.* The plan requires the facility to "maintain a list of doors that have been reported as problem doors," but it does not identify what are "problem doors." *See id.,* Section I.D.1, pages 10-11 (recently charged ovens): *see also* Section I.D.2 (all other operating ovens), page 11.

The corrective action provision for doors says nothing about what requires corrective action and what does not require corrective action:

> If door leakage is observed by the Door Cleaner or Machine Operator, ***he may inspect the leak to determine the cause and take corrective action such as retightening the latches***. If the problem door continues to leak, it will then be reported to the first line supervisor or Door Coordinator. ***The Door Coordinator will inspect door leaks as observed or reported to determine corrective action***. A door that will require repair is to either repaired on the

> unit or replaced by a reconditioned door. The Shift Manager's "Shift Report" along with the Emission Observer's report is to be used by the Door Coordinator to determine which doors must be taken out of service for cleaning, inspection, re-adjustment, and/or replacement. The Door Coordinator will schedule the transfer of problem doors to CDR for repair.

See id., Section I.D.3, page 11 (bold italics added for emphasis).

Provisions for an audit of the door and jamb repair program are weak. On its face, the purpose of the audit is only to spot-check to confirm that one door or jamb that has been repaired meets the specifications for a repaired door or jamb:

> The Area Manager-Maintenance will initiate ***an audit annually*** or more frequently as necessary ***to confirm that at least one door or jamb that has been repaired meets the specifications for a repaired door or jamb***.

See id., Section I.H.2.a, page 14 (bold italics added for emphasis). The remedy for "significant deviation from the prescribed specifications" is to provide "supplemental training," and not necessarily faster or more efficient repair and replacement. *See id.,* Section I.H.2.c, page 14.

c. For charging, the work practices plan does not specify standards or criteria for repair or replacement, or for corrective action.

Although the work practices plan provides for mechanical steps for repair and replacement for charging operations, it does not specify standards or criteria for repair or replacement, or for corrective action. *See id.,* pages 16-21. Therefore, it is a weak plan that could be improved by the Department through regulation.

The plan provides for inspections of the larry car, pusher machine, and offtake and charging system. *See id.,* Section III.A, pages 16-17. Although the plan states that a defect found during an inspection that will cause the release of emissions will be repaired to maintain emission control, it does not define "defect":

> ***Any defect found during on an inspection that will cause the release of emissions will be repaired to maintain emission control***.
>
> If the results of an inspection of equipment used to control charging emissions ***indicate problems which will cause the release of emissions, the equipment is to be repaired or replaced by a back-up machine***. The Maintenance Manager and/or teamleader is to determine a schedule for repairs based on priority.

See id., Section III.C, page 17. Presumably, the word "defect" is the determinative term, as the phrase "release of emissions" is unqualified as to extent, and "maintain emissions control" indicates a commitment to ensure that there will be no violations of the emissions limitations.

Provisions for an audit of the offtake repair/replacement program are weak. On its face, the purpose of the audit is only to spot-check to confirm that at least one item of equipment was repaired or replaced and meets operating specifications:

> The Area Manager-Maintenance will initiate ***an audit annually*** or more frequently as necessary ***to confirm that at least one item listed below was repaired or replaced and meets operating specifications***:
>
> pusher machine
> larry car
> standpipes and standpipe caps
> goosenecks and liquor spray nozzles
> charging hole castings and lids
> steam supply system
> liquor supply pressure.

See id., Section III.E.2, pages 18-19 (bold italics added for emphasis). The remedy for "significant deviation from the prescribed repair or replacement procedures" is to provide "supplemental training," and not necessarily faster or more efficient repair and replacement. *See id.,* Section V.E.2.c, page 27. Therefore, the criteria for the audit consist only of whether an item of repaired or replaced equipment meets operating specifications and whether the operator has followed prescribed repair or replacement procedures.

d. For topside lids, the work practices plan does not specify standards or criteria for repair or replacement, or for corrective action.

Although the work practices plan provides for mechanical steps for repair and replacement of charging hole lids, it does not specify standards or criteria for corrective action. *See id.,* pages 22-24. Therefore, it is a weak plan that could be improved by the Department through regulation.

The plan provides for inspections of charging hole lids. *See id.,* Section IV.A.1.a, page 22 ("Charging hole lids and castings are to be inspected by the lidman each time after the oven is pushed."). The plan contemplates the replacement of lids that are visually damaged. *See id.,* Section IV.A.2.a, page 22 ("Lidman and/or Battery Laborer is to replace any cracked or damaged lids that cannot be sealed with luting material."). The plan does not specify standards or criteria for repair or replacement. *See id.,* Section IV.A.2.c, page 22 (the facility is to "to compile a listing of defective charging hole castings. Repair or replacement is to be scheduled and performed.").

The plan contemplates "corrective action" for lid emissions that cannot be stopped by sealing, but it does not specify standards or criteria for corrective action

> Any lid emission that cannot be stopped by sealing, or other means, is to be reported to the first line supervisor and logged in

the "Daily Report". This report is to be submitted to the Senior Shift Manager for corrective action.

See id., Section IV.B.2.b, page 23.

Provisions for an audit of the lid repair/replacement program are weak. On its face, the purpose of the audit is only to spot-check to identify one item that was repaired or replaced and meets operating specifications:

> The Area Manager-Maintenance is to initiate ***an audit annually*** or more frequently as necessary ***to confirm that at least one of the items below was repaired or replaced and meets operating specifications***:
>
> 1) Lid
> 2) Charging Hole Casting.

See id., Section IV.C.2.a, page 24 (bold italics added for emphasis). The remedy for "significant deviation from the prescribed repair or replacement procedures" is to provide "supplemental training," and not necessarily faster or more efficient repair and replacement. *See id.,* Section IV.C.2.c, page 24. Therefore, the criteria for the audit consists only of whether an item of repaired equipment meets the operating specifications and whether the operator has followed prescribed repair or replacement procedures.

e. <u>For offtakes, the work practices plan does not specify standards or criteria for repair or replacement, or for corrective action.</u>

Although the work practices plan provides for mechanical steps for repair and replacement of offtakes, it does not specify standards or criteria for repair or replacement, or for corrective action. *See id.,* pages 25-27. Therefore, it is a weak plan that could be improved by the Department through regulation.

The plan provides for inspections of offtakes. *See id.,* Section V.A.1.a. ("The Larry Car Operator is to inspect the gooseneck, standpipe cap, and standpipe each time the oven is dampered off the main prior to the charging operation."). The plan only requires the reporting of defects that are likely to cause excessive emissions, and does not require the reporting of poor performing offtakes. *See id.,* Section V.A.2.a, page 25. ("Defects in any offtake system components which are likely to be cause excessive emissions are to be reported to the first line supervisor"). Moreover, the plan does not identify criteria or standards for determining whether offtakes are to be repaired or replaced. V.A.2.c ("Repair or replacement is to be scheduled and performed.").

Provisions for an audit of the offtake repair/replacement program are weak. On its face, the purpose of the audit is only to spot-check to confirm that one item of equipment has been repaired or replaced and meets operating specifications:

> The Area Manager-Maintenance is to initiate ***an audit annually*** or more frequently as necessary ***to confirm***

> ***that least one of the items listed below has been repaired or replaced and meets operating specifications***:
>
> Standpipe
> Standpipe caps
> Goosenecks.

See id., Section V.E.2.a, page 27 (bold italics added for emphasis). The remedy for "significant deviation from the prescribed repair or replacement procedures" is to provide "supplemental training," and not necessarily faster or more efficient repair and replacement. *See id.,* Section V.E.2.c, page 27. Therefore, the criteria for the audit consist only of whether an item of repaired or replaced equipment meets operating specifications and whether the operator has followed prescribed repair or replacement procedures.

In conclusion, the company's work practices plans do not set forth minimal requirements of performance that would trigger the need to repair or replacement equipment, if violated. They do not say that certain equipment must be repaired or replaced if there are violations of particular standards that are sufficiently frequent to merit repair and replacement.

f. The Department has the ability to gather information for establishing standards that would facilitate repair and replacement of equipment that tends to frequently violate applicable standards.

While the Department does review documents from the facility regarding daily performance in connection with emissions limitations for coke oven doors, topside port lids, offtake systems, and charging operations under subpart L, that is only part of the matter. In addition to complying with the minimal requirements of emissions limitations, the facility is required to maintain daily performance records regarding compliance with its work practice plan. It is not clear that this is happening.

The Department should identify "poor performance" or "high priority violators," among the items of leaking equipment. The ones with the lowest compliance percentages would be the highest priority violators. The Department could also gather data regarding multiple violations within a specified period of time. The data already exist and simply need improved interpretation and implementation.

10. Any revised application should reflect the upcoming retirement of batteries 1, 2, and 3, promised to take place in early 2023.

On or about April 30, 2021, the applicant made an unequivocal announcement that it would be permanently retiring batteries 1, 2, and 3:

> In the wake of the 2020 pandemic and the increased urgency of the climate crisis, we are reviewing all projects and facilities with an even greater focus on their implications for our carbon footprint. ***By early 2023, we will permanently idle Batteries 1, 2 and 3 at Clairton Plant, representing approximately 17% of coke***

> ***production – further improving environmental performance***. U. S. Steel remains committed to steelmaking in the Mon Valley for the next generation, with future investments to be developed in alignment with our 2050 carbon neutral goal.

See Attachment 48 – "An Open Letter to our Pittsburgh Family" from U.S. Steel, posted April 30, 2021 (bold italics added for emphasis), https://twitter.com/U_S_Steel/status/1388116103151357954. The letter is unambiguous as to intent ("we will permanently idle Batteries 1, 2 and 3") and precise as to time period ("[b]y early 2023"). This means that these three batteries will be retired within the next year – or sooner.

When the Department revises the Draft Permit, it should reflect the permanent retirement of these three batteries. The public wants a clean Title V permit that does not have outdated information in it.

11. <u>It is not improper to include in the proposed Title V permit new emissions limitations that are more stringent than "applicable requirements," contrary to the assertions of the applicant.</u>

At the public hearing on February 22, 2022, the applicant opposed the Department's inclusion of allegedly new emissions limitations in the proposed Title V permit, under the rationale that the Department could not legally add more emissions limitations that were not included in the previous Title V permit. It took this position in its preliminary comments and emails with the Department. *See* Attachment 49 – Applicant's Preliminary Comments, January 7, 2022. *See also* Attachment 50 – Email string between applicant and the Department, January-February 2022. According to applicant, the Department created new emissions limitations based on emissions factors provided by applicant in the 2016 application. *See id. See* Attachment 51 – Excel spreadsheet of emissions factors in 2016 application. As a matter of law, the applicant is wrong in asserting that additional, more stringent emissions limitations may not be imposed. Nothing in federal, state, or county regulations prohibits the inclusion of requirements that are more stringent than "applicable requirements."

One of the fundamental aspects of the Title V program is that the state air permitting agency is required to include all "applicable requirements" in the permit. *See* 40 C.F.R. §70.5(a). But there is nothing in the federal law that prohibits a state air permitting agency from including in a Title V permit requirements that are more stringent than "applicable requirements." *See generally* Section 501-507, 42 U.S.C. 7661-7661f.

Under the regulations, "applicable requirements" include requirements in a state implementation plan (the Department has prepared recent plans for sulfur dioxide and fine particulates), requirements in a NESHAP under Section 112 (the applicant is required to prepare a "work practice plan" for coke oven batteries). *See* 40 C.F.R. §70.2 (definition of "applicable requirements"). But there is nothing in the federal regulations that prohibits a state air permitting agency from including in a Title V permit requirements that are more stringent than "applicable requirements." *See* 40 C.F.R. part 70.

In fact, the federal regulations related to Title V permitting by states specifically contemplates the inclusion of terms and conditions more stringent than "applicable requirements":

> (2) Notwithstanding paragraph (b)(1) of this section, the permitting authority shall specifically designate as not being federally enforceable under the Act any terms and conditions included in the permit that are not required under the Act or under any of its applicable requirements. Terms and conditions so designated are not subject to the requirements of §§70.7, 70.8, or of this part, other than those contained in this paragraph (b) of this section.

See 40 C.F.R. §70.6(b)(2).

Similarly, the regulations of the Department recognize that the Department may do this. The regulations require the Department to specifically designate as not federally enforceable those terms and conditions "that are not required under either the Clean Air Act or other major source applicable requirements":

> d. **County requirements.** The Department shall specifically designate as not being federally enforceable under the Clean Air Act any terms and conditions included in each permit issued under this Subpart that are not required under either the Clean Air Act or other major source applicable requirements.

See Allegheny County Health Department, Rules and Regulations, Article XXI (Air Pollution Control), §2103.22(d), page C-23 (effective September 25, 2021).[7] If the applicant were correct and such terms and conditions were prohibited, then the regulations would not have required them to be identified as not being federally enforceable.

This should not be news to the applicant. The Department identified a number of terms and conditions that are not federally enforceable in the previous Title V permit that expired on March 27, 2017. *See* Attachment 1 – 2012 permit, pages 33 (including "County-only enforceable" requirement under county regulations for odor emissions), 36 (including "County-only enforceable" requirement under county regulations for monitoring of malodorous matter beyond facility boundaries), 38 (including "County-only enforceable" requirement under county regulations for asbestos abatement).

[7] A term or condition that is federally enforceable can form the basis for a citizen suit under Section 304 of the Clean Air Act, 42 U.S.C. 7604. Under that section, the definition of "[e]mission standard or limitation under this chapter" includes "any other standard, limitation, or schedule established under any permit issued pursuant to subchapter V or under any applicable State implementation plan approved by the Administrator, any permit term or condition, and any requirement to obtain a permit as a condition of operations." *See id.,* Section 304(f)(4), 42 U.S.C. 7604(f)(4). Nothing in Section 304 prohibits a state air permitting agency from including in a Title V permit a requirement that is not an "applicable requirement." *See id.*

The Department has also done this for emissions limitations, and not just for regulatory requirements. *See id.,* page 242 (including "County-only enforceable" requirement for annual emissions limit for sulfur dioxide from boiler 1), 245 (including "County-only enforceable" requirement for annual emissions limit for sulfur dioxide from boiler 2), 248 (including "County-only enforceable" requirement for annual emissions limit for sulfur dioxide from boilers R1 and R2).

In summary, the applicant is wrong when it asserts that the permit may not include requirements more stringent than "applicable requirements."

Finally, the Department should reject the applicant's request to insert a reference to the settlement agreement from 2019 in the Draft Permit. *See* Attachment 49 – Applicant's Preliminary Comments, page 47. For reasons set forth in the Commenters' comment on the proposed coke oven regulations in January 2021, it is unlawful for the Department to attempt to give up its authority to adopt more stringent standards for emissions from batteries in an agreement with the regulated industry.

12. <u>The Department should revise the Draft Permit to require more frequent monitoring and testing to assure compliance with multiple emission limits.</u>

As discussed above, Title V permits must identify operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance. 40 CFR §70.6(a)(1). Pursuant to the Clean Air Act, the Department must include monitoring, testing, and recordkeeping requirements that assure compliance with emission limits. 40 CFR § 70.6(c)(1). The Draft Permit is flawed in a number of these respects. The Department should correct this.

In 2008, the D.C. Circuit Court of Appeals vacated an EPA rule that would have prohibited state and local authorities from adding monitoring provisions to Title V permits if needed to "assure compliance." *See Sierra Club v. EPA*, 536 F.3d 673 (D.C. Cir. 2008). The court stated that a "monitoring requirement insufficient 'to assure compliance' with emission limits has no place in a [Title V] permit unless and until it is supplemented by more rigorous standards." *Id.* at 677 (citing 40 CFR § 70.6(c)(1)). In addition, the court acknowledged that the mere existence of periodic monitoring requirements may not be sufficient. *Id.* at 676–77. For example, the court noted that annual testing is unlikely to assure compliance with a daily emission limit. *Id.* at 675. In other words, the frequency of monitoring must have a reasonable relationship to the averaging time used to determine compliance. *Id.* In addition, the rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); *In the Matter of United States Steel, Granite City Works* ("Granite City I Order"), Order on Petition No. V-2009-03 at 7-8 (Jan. 31, 2011).

EPA has reinforced and supported this decision in multiple orders it has issued in response to Title V petitions. *See In the Matter of: Wheelabrator Baltimore, L.P., Baltimore Maryland*, Order Responding to Petitioners' Request that Administrator Object to the Issuance of a Title V Operating Permit, Permit No. 24-510-01886 (Apr. 14, 2010); *In the Matter of: Tennessee Valley Authority, Bull Run, Clinton, Tennessee*, Order Responding to Petitioners'

Request that the Administrator Object to the Issuance of a Title V Operating Permit, Petition No. IV-2015-14 (Nov. 11, 2016); *In the Matter of: Kinder Morgan Crude & Condensate LLC, Galena Park, Harrison County, Texas*, Order Responding to Petition Requesting Objection to the Issuance of Title V Operating Permit, Petition No. VI-2017-15 (Dec. 16, 2021) (where EPA granted petitioners' objection that monitoring associated with emissions limits on two heaters failed to assure compliance with emissions limits for VOCs because there was no indication in the permit that there were monitoring requirements associated with VOCs).

As explained in greater detail below, the Draft Permit does not include sufficient monitoring and testing requirements for multiple emission limitations and operational requirements.

a. The Draft Permit does not include sufficient monitoring or testing requirements for multiple PM emission limitations for the boilers, and the Draft Permit should be revised to require PM CEMS.

The Draft Permit subjects the boilers at the Facility to hourly (lbs/hr) and annual (tons/year) PM and PM10 limits. *Id.* at V.GG.1(h); V.HH.1(i); V.II.1(g); V.JJ.1(h).

The monitoring and testing requirements in the Draft Permit do not assure compliance with the boilers' emissions limits for PM and PM10. The Draft Permit does not require the permittee to monitor for PM emissions from any of the boilers despite each of the boiler sources being subject to hourly and annual emissions limits for PM. For boilers B001, R1, and R2, the permit does not include any monitoring or testing requirements for PM. For boiler B002, the permittee is required to conduct PM emissions stack tests only once every 5 years, which is too long of a duration between tests to assure compliance with the source's hourly PM limits. Draft Permit Condition V.HH.2(e). This testing is far too infrequent to ensure emissions meet hourly and annual limits.

The frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit. 40 C.F.R. § 70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676-77. EPA has concluded, for example, that annual stack testing alone is insufficient to assure compliance with an hourly limit. *In re Northeast Maryland Waste Disposal Authority*, Order on Petition No. III-2019-2, at 9, (Dec. 11, 2020) ("NMWDA Order"), *available at* https://www.epa.gov/sites/default/files/2020-12/documents/montgomery_response2019.pdf. In this order, EPA found that petitioners demonstrated that the annual stack testing required to demonstrate compliance with an hourly limit for hydrochloric acid (HCl) at Covanta's incinerator in Montgomery County, Maryland, was insufficient and that the additional monitoring measures cited by the permitting agency did not cure the deficiency. *Id.* In fact, in the NMWDA Order, the EPA strongly suggested that even monitoring on a 3-hour basis is likely inadequate to assure continuous compliance with an hourly standard. *Id.* at 10-11; note 10 ("use of a 3-hour block average, even if using a certified HCl CEMS, is likely inappropriate for demonstrating compliance with a 1-hour standard.")

The Department has also failed to provide any clear and documented rationale for any of these monitoring requirements in the Review Memo or Draft Permit, as required by 40 C.F.R. § 70.7(a)(5). The Review Memo does not include any discussion of why the monitoring

requirements for the PM limits for the boilers have been chosen. In fact, the term monitoring only appears twice in the Review Memo, and only with respect to monitoring required as part of the benzene waste operations NESHAP and a general reference that the "operating permit contains all testing, monitoring, recordkeeping, and reporting requirements (as required under 70.6(a)(3))." Review Memo, at 36 and 37.

The Department's references to testing in the Review Memo similarly do not provide a rationale for the monitoring and testing requirements for the limits for coke oven battery combustion stacks and boilers, and simply note that stack testing is required or that it is conducted or not conducted. *Id.* at 34, 35, 37.

The Department should supplement the monitoring requirements in the Draft Permit to assure compliance with the PM emission limitations for the coke oven battery combustion stacks and boilers. The Department ought to require the permittee to use PM CEMs to demonstrate compliance with the hourly PM limits. PM CEMs has been approved by the EPA as an alternate method of demonstrating compliance with federal emission limits for PM. 40 C.F.R. §60.58b(a)(10). Notably, EPA allowed PM CEMS for compliance demonstration purposes in its most recent regulations for municipal waste combustors without requiring that performance specifications must first be issued, in contrast to other types of continuous monitors. *See* 71 Fed. Reg. 27326; 40 C.F.R. §60.58b(a)(10).

b. <u>The Draft Permit does not include sufficient monitoring or testing requirements for CO emission limitations for coke oven battery combustion stacks and boilers, and the Draft Permit should be revised to require CO CEMS.</u>

All coke oven battery combustion stacks are subject to hourly (lbs/hr) and annual (tons/year) CO emission limitations. Draft Permit, Conditions V.A.1.(u), -(w), -(y); V.C.1.(v), -(x), -(z); V.E.1(bb), -(cc); V.G.1.(v); V.I.1(ii). The boilers at the Facility are also subject to hourly (lbs/hr) and annual (tons/year) CO limits. *Id.* at V.GG.1(h); V.HH.1(i); V.II.1(g); V.JJ.1(h). For example, CO emissions from the combustion stack for Coke Battery No. 1 are not allowed to exceed 40.94 lb/hr or 179.32 tons/year, with a year defined as any consecutive 12-month period. *Id.* at V.A.1.(u).

The monitoring and testing requirements in the Draft Permit do not ensure compliance with the emission limitations for CO from the coke oven battery combustion stacks and boilers. For battery combustion stacks, the permit requires each battery combustion stack source except for battery combustion stack C to have testing for CO conducted every two years. *Id.* at V.A.2.(d); V.C.2.(d); V.E.2.(d); V.G.2.(d). The permit does not require any testing for CO emitted from battery combustion stack C. *See id. at* V.I.4, V.I.5.

These testing requirements are insufficient to assure compliance with the hourly emissions limits because testing once every two years is too infrequent to ensure emissions meet hourly or annual limits. As discussed above, the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit. 40 C.F.R. § 70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676-77. EPA has concluded, for example, that even annual stack testing alone is insufficient to assure compliance with an hourly limit. NMWDA Order, at 9. Stack

testing once every two years is half as frequent, which is even less adequate to ensure compliance with the permits' hourly limitations and also clearly inadequate to capture an annual limitation. Furthermore, the permits' utter failure to require testing or monitoring of CO at all from battery combustion stack C renders the limits applicable to that unit wholly enforceable using the monitoring and testing provisions of this Title V permit. In order for the limitations contained in this permit to be enforceable, the permit should be revised to include testing and monitoring requirements with frequencies and durations short enough to ensure that compliance with each of the limitations can be assured through those monitoring and testing provisions.

Regarding boiler stacks, the monitoring and testing requirements in the Draft Permit for CO also do not assure compliance with the hourly emissions limits. The Draft Permit requires the permittee to monitor and record the volume of coke oven gas and natural gas combusted in each of the boilers on a daily basis. *Id.* at V.GG.3.(b); V.HH.3.(b); V.II.3; V.JJ.3. This form of monitoring might help the permittee determine the quantity of CO emissions from the boiler stacks on a daily basis, but it does not monitor CO on an hourly basis. For this reason, these monitoring provisions are not adequate to determine whether CO emissions from the boiler stacks will be in compliance with the permit limitations or not.

The Draft Permit requires CO stack testing from boilers numbers 1, 2, R1, and R2 to be conducted at least once every two years. *Id.* V.GG.2.(c); V.HH.2.(d); V.II.2.(a). But the Draft Permit requires no stack testing for CO from boilers T1 or T2. The Draft Permit does not assure compliance with the hourly emissions limits set for CO by these provisions for boilers 1, 2, R1, or R2 because CO stack testing that is only required to be conducted once every two years is not reasonably related to the hourly or annual limitations that the permit sets for CO, and are not frequent enough to assure compliance with these limitations. Even more clearly, because there is no requirement of stack testing for CO at boilers T1 and T2 at all, the permit fails to provide monitoring from these boilers sufficient to assure compliance with the hourly or annual CO limitations applicable to them in the permit.

Furthermore, the Department provided no clear rationale in the Review Memo or Draft Permit demonstrating why these flawed monitoring and testing choices were made. ACHD's failure to provide such rationale for the lack of adequate monitoring fails to comply with the requirements of 40 C.F.R. § 70.7(a)(5). The Review Memo does not include any discussion of why the monitoring and testing requirements for the CO limits for the coke oven battery combustion stacks or boilers have been chosen, nor any discussion of why the permit fails to include monitoring requirements for the CO limits for coke oven boiler stacks T1 or T2 at all. As discussed above, there is virtually no discussion of monitoring or testing in the Review Memo at all.

To assure compliance with the CO hourly and annual emissions limits, the Department should require that CO CEMS be installed in each of the battery combustion stacks and the boiler stacks. This will allow CO emissions from these sources to be monitored continuously. The Department should also supplement the monitoring requirements in the Draft Permit by requiring that CO CEMS be used to demonstrate compliance with the permits' CO limits. CO CEMS are available for this purpose and commonly used. *See* EPA Performance Specification 4 - Specifications and Test Procedures for Carbon Monoxide Continuous Emission Monitoring

Systems in Stationary Sources, (Aug. 7, 2017), *available at* https://www.epa.gov/emc/performance-specification-4-carbon-monoxide.

c. The Draft Permit does not include sufficient monitoring or testing requirements for VOC emission limitations for coke oven battery combustion stacks and boilers, and the Draft Permit should be revised to require VOC CEMS.

All coke oven battery combustion stacks are subject to hourly (lbs/hr) and annual (tons/year) VOC emission limitations. Draft Permit, Conditions V.A.1.(u), -(w), -(y); V.C.1.(v), -(x), -(z); V.E.1(bb), -(cc); V.G.1.(v); V.I.1(ii). The boilers at the Facility are also subject to hourly (lbs/hr) and annual (tons/year) VOC limits. *Id.* at V.GG.1(h); V.HH.1(i); V.II.1(g); V.JJ.1(h). For example, VOC emissions from the combustion stack for Coke Battery No. 1 are limited to 2.17 lb/hr and 9.50 tons/year. *Id.* at 53, Condition V.A.1.(u).

The monitoring and testing requirements in the Draft Permit do not ensure compliance with the emission limitations for VOCs from the coke oven battery combustion stacks and boilers. Coke oven battery combustion stack monitoring requirements established in the Draft Permit do not specifically apply to VOCs and the Department has provided no clear rationale in the Review Memo explaining why there is no monitoring of VOC emissions. The Draft Permit requires stack testing for VOCs for batteries 19, 20, and B at least once every four years. *Id.* at V.E.2.(e); V.G.2.(f). One stack test in four years is not sufficiently able to assure compliance with the hourly or even the annual permit limitations on VOC emissions from these units. As discussed above, the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit. 40 C.F.R. § 70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676-77. EPA has concluded, for example, that even annual stack testing alone is insufficient to assure compliance with an hourly limit. NMWDA Order, at 9. Here, therefore, stack testing once every four years is less adequate to ensure compliance with the permits' hourly limitations and also clearly inadequate to capture an annual limitation. The agency failed to provide a sufficient rationale for these inadequate monitoring or testing requirements.

Furthermore, the Draft Permit contains no requirement for combustion battery stack testing of VOCs for the other batteries, namely batteries 1, 2, 3, 13, 14, 15, C, at all in the Draft Permit. Without any stack testing of VOCs for these batteries, the Draft Permit clearly fails to contain monitoring or testing requirements sufficient to determine or assure compliance with the hourly or annual VOC emissions limitations applicable to these batteries. Moreover, the Department failed to provide a sufficient rationale for failing to include sufficient - or any - monitoring requirements for these batteries. Together, the infrequency of the required testing, the fact that such frequencies are not "reasonably related" to the VOC emissions limitations contained in the Draft Permit, the absence of monitoring requirements from some units all together, and the Department's lack of a clear rationale explaining the inadequacy of these requirements renders these provisions insufficient to assure compliance with the hourly emissions limits for VOC.

The Draft Permit does not require the permittee to specifically monitor for emissions of VOCs from the boiler stacks, but instead requires the permittee to conduct monitoring and recording of the volume of coke oven gas and natural gas combusted in each of the boilers on a daily basis. *Id.* V.GG.3.(b); V.HH.3.(b); V.II.3; V.JJ.3. As described in comment 12.B. above,

this is insufficient to assure compliance with the hourly emissions limitations of VOCs because the monitoring and recording is not conducted on an hourly basis. *See* 40 C.F.R. § 70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676-77; NMWDA Order, at 9. Much like the stack tests for VOCs from the battery combustion stacks, stack testing for VOCs from the boilers is not reasonably related to the hourly or annual VOC emissions limitations in the permit for these sources and are therefore not sufficient to capture data to assure compliance with these limits.

Furthermore, the permittee is required to conduct stack tests only once every four years for VOCs from boiler number one and once every five years from boiler number 2, and no stack testing for VOCs is required at all from boilers R1, R2, T1, and T2. *Id.* at V.GG.2.(d); V.HH.2.(e). Again, stack testing once every four or five years from some units and no stack testing requirements at all from other units are clearly inadequate to assure compliance with the Draft Permit's hourly or annual VOC emissions limitations from these boilers. *See* 40 C.F.R. § 70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676-77; NMWDA Order, at 9. Again, and deficiently, the Department provided no clear rationale in the permit record demonstrating why these insufficient monitoring and testing choices were made.

To assure compliance with the VOC hourly and annual emissions limits, the Department should require that VOC CEMS be installed in each of the battery combustion stacks and the boiler stacks. This will allow VOC emissions from these sources to be monitored continuously. VOC CEMS are available for this purpose as evidenced by EPA's performance specifications guidance on operating these devices. *See* Performance Specification 8 for Volatile Organic Compounds for Continuous Emissions Monitoring System, (Oct. 7, 2020), available at https://www.epa.gov/emc/performance-specification-8-volatile-organic-compounds-continuous-emission-monitoring-system.

d. The Draft Permit does not include sufficient monitoring and testing requirements for hourly and annual NOx emission limitations for several coke oven battery combustion stacks and boilers, and the Draft Permit should be revised to require NOx CEMS.

All coke oven battery combustion stacks are subject to hourly (lbs/hr) and annual (tons/year) NOx emission limitations. Draft Permit, Conditions V.A.1.(u), -(w), -(y); V.C.1.(v), -(x), -(z); V.E.1(bb), -(cc); V.G.1.(v); V.I.1(ii). The boilers at the Facility are also subject to hourly (lbs/hr) and annual (tons/year) NOx limits. *Id.* at V.GG.1(h); V.HH.1(i); V.II.1(g); V.JJ.1(h).

The monitoring and testing requirements in the Draft Permit do not assure compliance with the emission limitations for NOx from the coke oven battery combustion stacks and boilers. The Draft Permit includes no requirements for continuous monitoring of NOx from any of the coke oven battery combustion stacks. In contrast, the Review Memo and certain testing requirements reference the existence of a NOx CEMS for coke oven battery combustion stack B. Review Memo, at 35; Draft Permit, Condition V.G.2.(e). The Draft Permit, but not the Review Memo, also requires testing of a NOx CEMS for coke oven battery combustion stack C, but there is no indication in the permit record that this exists and no monitoring or testing requirement in the Draft Permit related to the operation of this CEMS. *Id.* at V.I.2.(t). At a minimum, the Department should include a requirement in the Draft Permit to require the operation of a NOx

CEMs to assure compliance with the NOx hourly and annual emissions limits from the coke oven battery combustion stacks B and C. The Department should also revise the Draft Permit to require the installation and operation of NOx CEMS for all other battery combustion stacks.

The Draft Permit requires that the permittee conducts stack tests for NOx only once every two years at battery combustion stacks 1, 2, 3, 13, 14, 15, 19, 20, and B. *Id.* at V.A.2.(d); V.C.2.(d); V.E.2.(d); V.G.2.(d). There is no reasonable relationship between the periodicity of these NOx stack tests and the hourly emissions limits for NOx. Therefore, they do not assure compliance with those emissions limits.

The Draft Permit does require the use of NOx CEMS on Boilers numbers 1 and 2. *Id.* at V.GG.1.(c); V.HH.1.(c). However, the Draft Permit does not include any requirements for the operation of CEMS for any of the other boiler stacks, and requires that stack tests for boilers R1, R2, T1, and T2 be conducted only once every two years. *Id.,* at V.II.2.(a); V.JJ.2.(a). As discussed above, this two year frequency is insufficient to assure compliance with the hourly and annual emissions limits for NOx, and the Department should revise the Draft Permit to require the use of NOx CEMs.

e. The Draft Permit does not include sufficient monitoring or testing requirements to ensure the bypass/bleeder stack flares meet all applicable requirements.

The Draft Permit requires the permittee to install, operate, and maintain bypass/bleeder stack flare systems in each battery that are capable of controlling 120 percent of the normal gas flow generated by each battery. *Id.* at V.A.1.(a); V.C.1.(a); V.E.1.(a); V.G.1.(a); V.I.1.(o). The Draft Permit also requires that each flare system for each battery be designed for a net heating value of 240 Btu per standard cubic feet (Btu/scf) and have a continuously operable pilot flame that is present at all times as determined by a thermocouple or any other equivalent device. *Id.* at V.A.1.(d) and (e); V.C.1.(d) and (e); V.E.1.(d) and (e); V.G.1.(d) and (e); V.I.1.(p).[8]

The monitoring requirements included in the Draft Permit are not sufficient to ensure that the flare systems are capable of controlling 120 percent of the normal gas flow generated by each battery and operating at a net heating value of 240 Btu per standard cubic feet (Btu/scf). 40 CFR §70.6(c)(1) requires that the permit contain with respect to compliance, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. The Draft Permit does impose minimal monitoring requirements on these flares, requiring the use of visible emissions monitoring found in Method 22 to ensure that visible emissions do not exceed a total of 5 minutes during any 2 consecutive hours and the use of the thermocouple to ensure that the pilot light remains lit. *Id.* at V.A.3.(g); V.C.3.(g); V.E.(g); V.G.(g). These monitoring requirements are not imposed on battery C's flare.

[8] The flares appear to be an additional emissions control for the hourly and annual emissions limits of PM, CO, VOC, and NOx and the 30 day rolling average, supplementary 24-hr, and tons per year limit for SO2 emissions from the coke battery combustion stack sources and the Facility's annual benzene emissions limit. *Id.* at V.A.1.(x), -(u), -(v), -(w), -(y); V.C.1.(v), -(w), -(x), -(z); V.E.1(bb), -(cc), -(dd); V.G.1.(v); V.I.1(ii); VIII.

The monitoring requirements for these flares are insufficient and should be supplemented to assure compliance with their operational requirements. First, neither the Draft Permit nor the Review Memo clearly indicate the frequency of the Method 22 visible emissions monitoring. Second, the Draft Permit sets no clear monitoring to assure that the operational requirements of controlling 120 percent of the normal gas flow generated by each battery and operating at a net heating value of 240 Btu per standard cubic feet (Btu/scf) are achieved, and the Review Memo provides no clear rationale for this choice.

It is also unclear in the permit record whether the bypass/bleeder stack flare systems are steam or air assisted. If we assume that the flares are steam or air assisted, EPA has directed a state agency in at least one recent order on a Title V petition to impose more stringent monitoring and operating requirements on flares to assure that they are achieving compliance with their operational and emissions limits. *See In the Matter of BP Amoco Chemical Company Texas City Chemical Plant Galveston County, Texas*, Order on Petition No. VI-2017-6 (Jul. 20, 2021). The permit in question in that order required that flares achieve a 98% destruction efficiency of VOCs and benzene and the installation of a continuously operating pilot light, but lacked other monitoring methods to assure compliance with those operational limits and the emissions caps on VOCs and benzene. *Id.* at 19. The petitioners presented evidence that additional monitoring requirements were necessary to address problems that are known to reduce destruction efficiency, like over-steaming, excess aeration, high winds, and flame liftoff. *Id.* at 20. EPA concluded:

> [I]t will be necessary to monitor the flow and composition of assist steam and any supplemental gasses (e.g., natural gas) combusted by the flare, in order to calculate the NHVcz, before presuming that BP Amoco's flares achieve a 98 percent VOC destruction efficiency. To this end, TCEQ should consider adding permit terms mirroring the monitoring and calculation methodologies in the EPA's refinery regulations—specifically, 40 C.F.R. § 63.670(i) and (m).

Id. at 25. EPA relied on EPA studies and the finalized petroleum refinery NESHAP finding that the 98% destruction efficiency found in 40 CFR §60.18 is rarely achievable. *Id.* at 20-24.

The Department should take into account this order and impose similar monitoring requirements to assure compliance with the operational requirements that the Draft Permit imposes on the flares. The recommendations presented by the petitioners in the decision cited above, endorsed by EPA, and which were part of the final petroleum refinery NESHAP should be incorporated into this permit. The Department should incorporate the requirements found in 40 CFR §63.670(i), which provide a variety of monitoring methods for monitoring flare vent gas, steam assist and air assist flow rate and can assure that the control of 120 percent of the normal gas flow rate is achieved. The Department should also incorporate the requirements of 40 CFR §63.670(e) and (m), which provide monitoring and calculation methods to assure that the 240 Btu/scf net heating value in the flare combustion zone is maintained and achieved. Additionally, the Department should require that the visible emissions observations, required by Conditions V.A.3.(g); V.C.3.(g); V.E.(g); V.G.(g), occur more frequently, either daily, as required by 40 CFR §63.670(h), or hourly. The Department should also clarify in the permit

which kind of flare the permittee is currently operating (steam/air assisted or neither) so that compliance with those requirements can be more accurately assured.

The Department should add language to the permit ensuring that the existing monitoring requirements for the operation of the flare systems as well as the supplemental requirements recommended above are applied to the bypass/bleeder stack flare systems on Battery C.

f. The Draft Permit does not include sufficient monitoring or testing requirements for hourly or annual benzene, hydrochloric acid, or naphthalene emission limitations for the Coke Oven Battery C combustion stack or hourly or annual benzene, hexane, hydrochloric acid, ammonia, or hydrogen sulfide emission limitations for the Coke Battery No. 20 combustion stack.

The Draft Permit sets hourly and annual emissions limits on benzene, hydrochloric acid, and naphthalene from the Coke Oven Battery C combustion stack. Draft Permit Condition V.I.1.(ii). The Draft Permit also sets hourly and annual emissions limits on benzene, hexane, hydrochloric acid, ammonia, and hydrogen sulfide from the Coke Oven Battery No. 20 combustion stack. *Id.* at Condition V.E.1.(cc).

The monitoring and testing requirements for emissions of benzene, hydrochloric acid, and naphthalene from Coke Oven Battery C do not assure compliance with the hourly and annual emissions limits for those pollutants. The Draft Permit includes no monitoring or testing requirements for these pollutants from Coke Oven Battery C, therefore, this permit clearly fails to assure compliance with the hourly and annual emissions limits. Without monitoring requirements for each of these pollutants at frequencies that are "reasonably related" to the hourly and annual permit limitations for emissions of these pollutants from this source, compliance with such limitations cannot be assured by this Draft Permit. Furthermore, the Review Memo provides no explanation or rationale explaining the absence of these requirements. The Department needs to modify the permit to include sufficient monitoring and testing requirements to assure compliance with the hourly and annual emissions limits.

The monitoring and testing requirements for emissions of benzene, hexane, hydrochloric acid, ammonia, and hydrogen sulfide from the Coke Oven Battery No. 20 combustion stack also do not sufficiently assure compliance with the source's hourly and annual emissions limits for these pollutants because the Draft Permit does not include monitoring or testing requirements for them. Without monitoring requirements for each of these pollutants at frequencies that are "reasonably related" to the hourly and annual permit limitations for emissions of these pollutants from this source, compliance with such limitations cannot be assured by this Draft Permit. The Review Memo also provides no rationale explaining the absence of these requirements. The Department should revise the Draft Permit to include sufficient monitoring and testing requirements to assure compliance with the hourly and emissions limits that it sets for this source.

g. The Draft Permit does not include sufficient monitoring and testing requirements for hourly and annual ammonia, hexane, and hydrochloric acid for the boiler stacks.

The Draft Permit establishes hourly and annual emissions limitations for ammonia, hexane, and hydrochloric acid from the boiler stacks. *Id.* at Condition V.GG.1.(h); V.HH.1.(i); V.II.1.(g); V.JJ.1.(h).

The monitoring and testing requirements for emissions of these pollutants from the boiler stack sources does not assure compliance with the source's hourly and annual emissions limits. The Draft Permit requires the permittee to conduct monitoring and recording of the volume of coke oven gas and natural gas combusted in each of the boilers on a daily basis. However, neither the Draft Permit nor the Review Memo describe adequately or clearly how, or even if, this analysis might be used to determine emissions of ammonia, hexane, or hydrochloric acid on an hourly basis. *Id.* at V.GG.3.(b); V.HH.3.(b); V.II.3; V.JJ.3. The Draft Permit includes no other monitoring or testing requirements of these pollutants from these sources, therefore, it fails to sufficiently assure compliance with the emissions limits of those pollutants. The Department needs to add sufficient monitoring and testing requirements in the permit to ensure that compliance with the hourly and annual emissions limitations for each of these pollutants from the boiler stacks can be assured.

h. The Draft Permit does not include sufficient monitoring or testing requirements to ensure the ammonia flare complies with multiple emission limitations, achieves a minimum destruction efficiency of 98%, or meets other applicable permit restrictions.

The ammonia flare is subject to the following emissions:

Table V-LL-1
Ammonia Flare Emission Limitations

Pollutant	Total Emissions	
	lb/hr	tons/yr[1]
SO_2	1.0	1.5
NO_X	19.80	19.03
CO	0.44	0.95
VOC	0.30	0.49
Ammonia	20.0	14.0

[1]A year is defined as any consecutive 12-month period

Id. at KK.1(d). In addition, the flare must be "properly maintained and operated so that a minimum destruction efficiency of 98% is maintained." Draft Permit, Condition KK.1(a). In addition, the ammonia flare must maintain "a temperature of 1,570 degrees Fahrenheit or higher with a minimum residence time of 0.50 seconds at all times when emissions from the wastewater surge tanks and/or anhydrous ammonia loading operations are exhausted to the flare." *Id.* at KK.1(c). The operating hours for the flare are also limited. *Id.* at KK.1(b).

The permit includes monitoring and testing requirements for the emission limits in Table V-LL-1, a requirement to achieve at least 98% destruction efficiency, and a requirement to maintain a minimum residence time of 0.50 seconds when emissions are exhausted to the flare. But these requirements are insufficient to ensure compliance with the hourly or annual emissions limitations excerpted above, the 98% minimum destruction efficiency requirement or the minimum residence time requirement. The Draft Permit only requires emissions testing once every five years to determine the destruction efficiency of the flare and emission rates. *Id.* at KK.2(a). The Draft Permit does include requirements to continuously monitor and record the temperature of the flare and operating hours, but there are no requirements to ensure the flare achieves the minimum residence time. *See id.* at KK.2. The Draft Permit and review memo contain no rationale for the selected monitoring and testing requirements.

A test once every five years is clearly not sufficient to meet hourly or annual emission limits and operational requirements that must be met at all times. *See, e.g.*, *Sierra Club*. 536 F.3d at 675. The frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit. *Id.*; 40 C.F.R. §70.6(a)(3)(i)(B). For example, as noted previously, EPA has determined that annual stack testing alone is insufficient to assure compliance with an hourly limit. NMWDA Order, at 9. In addition, there are no requirements at all related to the minimum residence time when emissions are exhausted to the flare.

According to the Review Memo, the flare might be gas assisted, but the permit record does not make this specification clear. Review Memo, at 6. To assure compliance with the emissions limitations for this source, the Department should clarify whether this is a gas assisted, steam assisted, or air assisted flare. As described in section 12.E of this comment, steam and air assisted flares, without adequate monitoring and operational requirements, rarely achieve the claimed 98% destruction efficiency and this Draft Permit fails to include those sufficient monitoring requirements. Therefore, our request is the same - the Department should revise the Draft Permit to include the monitoring and testing requirements found in the petroleum refinery NESHAP at 40 CFR § 63.670. Additionally, the Department should require that a continuously lit pilot light be installed on the flare along with the accompanying monitoring found in the petroleum refinery NESHAP.

i. <u>The Draft Permit does not include sufficient monitoring or testing requirements for SO2 emission limitations for boilers and coke oven battery combustion stacks during periods of malfunction, breakdowns, and repairs.</u>

Several boilers and coke oven battery combustion stacks are subject to multiple SO2 emission limitations. Specifically, Boilers B001, B002, B005, B006, B007, and B008 are subject to the following limits: (1) 30-day rolling average (lb/hr) - 118.44; (2) supplementary 24-hr limit (lb/hr) - 134.06; and (3) tons per year - 518.77. Draft Permit, Condition IV.32(f). Similarly, all coke oven batteries are subject to a 30-day rolling average, supplementary 24-hr, and tons per year limit for SO2 emissions. *Id.* at V.A.1(v), -(x), -(z); V.C.1(w), -(y), -(aa); V.E.1.(dd); V.G.1(w); V.I.1(ii).

For each of these emission limits, the Draft Permit states that U.S. Steel must "continuously" monitor and record the H2S grain loading and fuel flow rate in order to calculate

sulfur dioxide emissions except for periods of monitor malfunction, breakdown, and repair. *Id.* at IV.32(b)-(c). "Continuous" means at least once every 15 minutes. *Id.* During periods of monitor malfunction, breakdown, and repair, U.S. Steel must propose a procedure for measuring the H2S content of the gas for the Department's approval. *Id.* at 48, Section IV.32(a).[9] However, the procedure is not incorporated into the Draft Permit nor are there other monitoring or testing requirements for these periods. Consequently, these monitoring requirements and the exception without alternative monitoring requirements are inadequate to assure compliance with the permit limitations for SO2 for these boilers and coke oven battery combustion stacks. Although the Draft Permit also requires SO2 stack tests for at least some of the coke oven battery combustion stacks once every two years, this is clearly not sufficient to assure compliance with the 30 day, 24-hour, or even annual SO2 limits for these sources. *Id.* at V.A.2(b), V.C.2(b), V.E.2(b), V.G.2(b). *See* discussion above, and *see, e.g., Sierra Club*. 536 F.3d at 675. The Draft Permit and review memo contain no explicit rationale for the selected monitoring and testing requirements. The Department should revise the Draft Permit to require additional monitoring and testing requirements to address this deficiency and to ensure that each of the SO2 limitations in the permit for Boilers B001, B002, B005, B006, B007 and B008, as well as for all coke oven batteries, has specific monitoring requirements included in the permit so that compliance with each limitation can be assured by those monitoring requirements.

j. <u>The Draft Permit does not include sufficient monitoring or testing requirements to assure compliance with emissions limits at the Desulfurization Plant.</u>

The Draft Permit sets hourly and annual emissions limitations from the Desulfurization Plant for PM, SO2, CO, NOx, VOC, and H2S as shown in the following table:

TABLE V-O-1 - Emission Limitations for SCOT Plant

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	0.38	1.66
PM_{10}	0.37	1.63
SO_2**	24	105.12
CO	12.28	53.79
NO_X	0.84	3.68
VOC	0.99	4.34
Hydrogen Sulfide	0.87	3.81

*A year is defined as any consecutive 12-month period.
**SO_2 SIP IP 0052-1017, Condition V.B.1.c.

Draft Permit, Condition V.O.1.(k).

[9] There is an error in the permit numbering. The permit subsections for Section IV.32 are numbered: (a), (b), (c), (d), (a), (e), (f), (g). *See* Draft Permit, at 48-49. This requirement is the second (a) subsection. The permit should be renumbered here to avoid the duplication (having a section subsection "(a)") and to prevent confusion.

However, the Draft Permit fails to set sufficient monitoring or testing requirements that assure compliance with the desulfurization plant's hourly or annual emissions limits. The Draft Permit requires the permittee to monitor and record online operating hours of the plant and to continuously monitor the concentration of sulfur compounds in the desulfurized coke oven gas according to the continuous Method approved by the Department. *Id.* at Condition V.O.3.(a) and (b). The permittee is also required to perform a stack test every two years of the plant's incinerator waste gas stream to measure the emission rate of sulfur compounds. *Id.* at Condition V.O.2.(a). Neither of these measures is sufficient to assure compliance with the hourly or annual emissions limits in the table above. Moreover, neither the Review Memo nor the Draft Permit describe how the monitoring and recording of online operating hours at the plant will sufficiently monitor emissions of PM, CO, NOx, or VOC on an hourly or annual basis. The Draft Permit includes no other monitoring or testing requirements for PM, CO, NOx, or VOC that apply to the desulfurization plant. The Department should require the installation of CEMS at the desulfurization plant that monitor PM, CO, NOx, and VOC[10] as recommended for other sources in multiple comments above to assure compliance with the hourly and annual emissions limits for these pollutants from the desulfurization plant.

As for the H2S and SO2 testing and monitoring requirements, as described in comments above, an annual testing requirement is insufficient to assure compliance with an hourly emissions limitation. *See* 40 C.F.R. § 70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676-77; NMWDA Order, at 9. While the continuous monitoring of sulfur compounds in the desulfurized coke oven gas appears to be reasonably related to the hourly emissions limit for SO2 and H2S, it is not sufficient to determine compliance with the emissions limits for SO2 or H2S because the Department did not incorporate the continuous method that was selected and which they approved (similar to what the Department failed to do described in comment 12.i). The Draft Permit should incorporate the continuous method selected and used for monitoring the concentration of sulfur compounds. Clarity on this requirement would help assure compliance with the hourly and annual emissions limitations. Additionally, the Department has not provided a clear rationale in the Review Memo or the Draft Permit to explain how this testing and monitoring is expected to assure compliance with the hourly and annual emissions limits for H2S and SO2. While the current method might be effective with adequate explanation and rationale, the best course of action for the Department to assure compliance with the hourly and annual SO2 emissions would be to require the installation of an SO2 CEMS, which are a proven monitoring method, in the SCOT plant combustion stacks. *See* Performance Specification 2 Specifications and Test Procedures for SO2 and NOx Continuous Emissions Monitoring Systems in Stationary Sources, EPA (Jan. 14, 2019), *available at* https://www.epa.gov/emc/performance-specification-2-sulfur-dioxide-and-nitrogen-oxide; Continuous Emissions Monitoring of Air Permitted Facilities, Environmental Fact Sheet, New Hampshire Department of Environmental Services (2020), *available at* https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/ard-65.pdf.

[10] As further evidence, CEMS are currently in-use for these pollutants as described in the following fact sheet: Continuous Emissions Monitoring of Air Permitted Facilities, Environmental Fact Sheet, New Hampshire Department of Environmental Services, 2020, available at https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/ard-65.pdf.

k. The Draft Permit does not include sufficient monitoring or testing requirements to assure compliance with emissions limits for VOC, methanol, benzene, HCl, H2S, phenol, or ammonia at the Coke By-Product Plant.

The Draft Permit sets hourly and annual emissions limitations from the Coke By-Product Plant for VOC, methanol, benzene, HCl, H2S, phenol, and ammonia as shown in this table:

TABLE V-Q-1 – By-Products Area Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
VOC	13.25	58.03
Methanol	12.33	54.0
Benzene	0.52	2.26
HCL	3.31	14.48
Hydrogen Sulfide (H_2S)	5.92	25.92
Phenol	2.37	10.35
Ammonia	21.55	94.38

[1]A year is defined as any consecutive 12-month period.

Draft Permit, Condition V.Q.1.(fff).

The testing and monitoring requirements that the Draft Permit establishes for this source do not assure compliance with the hourly and annual emissions limitations for each of these pollutants. First, the testing requirements do not include testing for any of these specific pollutants other than benzene. *Id.* at 265, Condition V.Q.2.(a) to (f). The benzene test is an analysis of the annual total benzene quantity from facility waste. *Id.* at V.Q.2.(b). There is no reasonable relationship between this annual quantity and the hourly benzene emissions limitations. Neither the Review Memo nor the Draft Permit provide any clear rationale for this deficiency.

The monitoring requirements are also inadequate to assure compliance with the hourly or annual limitations. The monitoring requirements primarily include visual inspections of leaking connections, seals, valves, and pipes with inconsistent periods of time between each visual inspection. *Id.* at 269, Section V.Q.3. Specifically, V.Q.3.(a) states, "the permittee shall monitor the connections and seals on each control system to determine if it is operating with no detectable emissions…This monitoring and inspection shall be conducted on a semiannual basis and at any other time after the control system is re-pressurized with blanketing gas following removal of the cover or opening of the access hatch." V.Q.3.(b) requires maintenance inspections of some control equipment to occur on an annual basis whereas V.Q.3.(c) requires visual inspections and monitoring of other control equipment to be conducted, "semiannually and at any other time the cover is removed." Exhausters are required to be monitored for leaks quarterly. *Id.* at V.Q.3.(d). Valves are required to be monitored monthly. *Id.* at V.Q.3.(r). Closed vent systems are required to be visually inspected annually for visible, audible, or olfactory indications of leaks. *Id.* at V.Q.3.(nn). If closed vent systems are constructed of

ductwork then the annual inspection must comply with V.Q.3.(uu). *Id.* at V.Q.3.(nn).2). Methanol tanks must be inspected daily when they are in operation. *Id.* at V.Q.3.(zz).

None of these monitoring requirements are able to assure compliance with the hourly or annual emissions limits for any of the pollutants for which this source has those limitations. Neither the Draft Permit nor the Review Memo describe how each of these requirements monitors any of the pollutants individually and hourly and there is no reasonable relationship between the frequency of each of the inspections and the hourly frequency of the limits. The Department should explain how these monitoring requirements relate to the pollutants for which they are required to control or establish monitoring requirements that are frequent enough to assure compliance with the hourly limits.

Furthermore, Condition V.Q.3.(ll) mentions the possible existence or use of a flare to control emissions from this source, but does not include any of the monitoring requirements, which are needed to assure compliance with any emissions from that flare and its effective operation, which we have detailed above in comments 12.e and 12.h. The Department should confirm whether the flare is in operation at this source, what type of flare is in operation at the source, incorporate that into the permit, and include the requirements that we recommended to ensure that all limitations in the permit have corresponding monitoring requirements detailed in the permit that are sufficient to assure compliance.

l. <u>The Draft Permit does not include sufficient monitoring or testing requirements to assure compliance with emissions limits for PM, SO2, NOx, or VOCs for the Quench Towers.</u>

The Draft Permit imposes hourly and annual emissions limitations on PM, SO2, NOx, and VOCs for each of the quench towers.

TABLE V-J-1 - Emission Limitations for Quench Tower No. 1

POLLUTANT**	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	8.51	37.30
PM_{10}	5.11	23.40
$PM_{2.5}$	4.26	18.25
PM-condensable	3.51	15.42
SO_2	0.75	3.29
NO_X	0.35	1.55
VOC	2.22	9.71

*A year is defined as any consecutive 12-month period.
**SO_2 limit is based on SO_2 SIP IP 0052-1017.

Draft Permit, Condition V.J.1.(d).

TABLE V-J-2 - Emission Limitations for Quench Tower B

POLLUTANT***	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	6.87	30.08
PM_{10}	4.12	18.05
$PM_{2.5}$	3.43	15.04
PM-condensable	2.64	11.57
SO_2	4.09	17.91
NO_X	0.66	2.89
VOC	2.24	9.83

*A year is defined as any consecutive 12-month period.
**SO_2 limit is based on SO_2 SIP IP 0052-1017.

Id. at Condition V.J.1.(e)

Table V-K-1 - Quench Tower 5A Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
Particulate Matter (total)	29.25	128.11
PM_{10}	28.53	124.94
$PM_{2.5}$	27.80	121.76
NO_X	0.43	1.90
Sulfur Dioxides**	7.56	33.11
Volatile Organic Compounds	25.87	113.29

[1]A year is defined as any 12 consecutive months.
**SO_2 SIP IP 0052-1017, Condition V.B.1.c.

Id., Condition V.K.1.(i).

Table V-L-1 - Quench Tower 7A Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
Particulate Matter (total)	34.71	152.05
PM_{10}	33.85	148.28
$PM_{2.5}$	32.99	144.51
Sulfur Dioxides**	7.21	31.58
NO_X	0.39	1.70
Volatile Organic Compounds	24.69	108.16

[1]A year is defined as any 12 consecutive months.
**SO_2 SIP IP 0052-1017, Condition V.B.1.c.

Id. at Condition V.L.1.(i).

Table V-M-1 - Quench Tower No. 5 Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
Particulate Matter (total)	5.61	24.56
PM_{10}	3.36	14.73
$PM_{2.5}$	2.80	12.28
PM-condensable	2.06	9.0
NO_X	0.43	1.88
Sulfur Dioxides	1.01	4.42
Volatile Organic Compounds	2.09	9.17

[1]A year is defined as any 12 consecutive months.

Id. at Condition V.M.1.(d).

Table V-M-2 - Quench Tower No 7 Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
Particulate Matter (total)	15.10	66.15
PM_{10}	9.06	39.70
$PM_{2.5}$	7.55	33.08
PM-condensable	6.57	28.77
NO_X	0.39	1.70
Sulfur Dioxides	0.66	2.91
Volatile Organic Compounds	3.16	13.83

[1]A year is defined as any 12 consecutive months.

Id. at Condition V.M.1.(e).

The testing and monitoring requirements that the Draft Permit establishes for the quench tower sources do not assure compliance with the hourly and annual emissions limitations for each of these pollutants. The Draft Permit sets nearly identical testing and monitoring requirements for each of the quench tower sources. In accordance with the pushing, quenching, and battery stacks NESHAP, 40 CFR 63 Subpart CCCCC, the permittee is required to demonstrate continuous compliance with the total dissolved solids ("TDS") limit for quench water by determining the TDS content in quench water on a weekly basis and also demonstrate continuous compliance with the constituent limit for quenching by maintaining the sum of the concentrations of benzene, benzo(a)pyrene, and naphthalene in the water used to quench hot coke at levels less than or equal to the site-specific limit approved by the Department and determining the sum of the constituent concentrations at least monthly according to the requirements in 40 CFR §63.7325(c). *Id.* at Condition V.J.3.(b) and (c); V.K.3.(b) and (c); V.L.3.(b) and (c); V.M.3.(b) and (c). While these requirements do monitor for emissions of benzene, they only do so on a weekly basis rather than on an hourly basis.

Furthermore, none of the Draft Permit's monitoring requirements for these sources require monitoring for any of the pollutants for which they are subject to hourly and annual emissions limits. Conditions V.K.2.(e) and V.L.2.(e) do require PM10 and PM2.5, sulfur oxides, and VOC emissions tests on their quench tower outlets at least once every two years in accordance with Condition IV.14.a, but again, as reiterated multiple times above, a one year

annual test is insufficient to assure compliance with hourly emissions limitations. *See* 40 C.F.R. § 70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676-77; NMWDA Order, at 9. The Draft Permit and supporting documents also fail to provide a rationale for how the Draft Permit's deficient monitoring requirements can assure compliance with the hourly or annual emissions limitations for the man pollutants listed above. The permit should be revised to expressly incorporate monitoring requirements sufficient to assure compliance with each limitation in the permit for each pollutant from the quench towers.

The Draft Permit also fails to identify the site-specific limit for concentrations of benzene, benzo(a)pyrene, and naphthalene, which the Department, we are assuming, has and is required to approve. Compliance with those limits and with these hourly emissions limits for those pollutants cannot be assured unless that site-specific limit is incorporated and included in the final permit.

In accordance with the guidance detailed in comments above, the Department should require the installation of PM, NOx, SO2, and VOC CEMs on each quench tower's outlet. This continuous monitoring would assure compliance with those pollutants' hourly emissions limits.

m. <u>The Draft Permit does not include sufficient monitoring or testing requirements to assure compliance with emissions limits for emissions from the Pushing Emission Control Systems.</u>

The Draft Permit sets hourly and annual emissions limits for PM, NOx, CO, VOC, and SO2 from the Pushing Emission Control ("PEC") Systems sources as well as hourly and annual emissions limits of SO2 from the hot car sources for every battery, but battery B. These emissions limits are as follows:

TABLE V-B-1 - Emission Limitations for Batteries 1, 2 & 3 PEC System Baghouse (Each PEC Baghouse)

POLLUTANT***	GR/DSCF	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	0.010	1.98	8.68
PM_{10}	0.010	1.98	8.68
SO_2**		7.10	31.10
NO_X		2.22	9.70
CO		4.61	20.17
VOC		0.23	0.10

*A year is defined as any consecutive 12-month period.
**SO_2 limits based on SO_2 SIP IP 0052-4017. The limits are combined for all the three (3) PEC baghouses.
***NO_X,CO, & VOC emissions include PEC baghouse, PEC travel hot car, pre-push and PEC fugitive emissions

Draft Permit, Condition V.B.1.(g).

TABLE V-B-2 – SO_2 Emission Limitations for Batteries 1-3 Hot Car

POLLUTANT**	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
SO_2	10.64	46.60

*A year is defined as any consecutive 12-month period
**These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

Id. at Condition V.B.1.(h).

TABLE V-D-1 - Emission Limitations for Batteries 13, 14 & 15 PEC System Baghouse (Each PEC)

POLLUTANT***	LBS/TON-COKE	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	0.040	5.80	25.40
PM_{10}	0.040	5.80	25.40
SO_2**		7.46	32.67
NO_X		2.33	10.22
CO		5.36	23.46
VOC		0.13	0.55

*A year is defined as any consecutive 12-month period.
**SO_2 limit is based on SO_2 SIP IP 0052-I017. The limits are combined for all the three (3) PEC baghouses
***NOx, CO, & VOC include PEC baghouse, PEC travel hot car, pre-push and PEC fugitive emissions

Id. at Condition V.D.1.(g).

TABLE V-D-2– SO_2 Emission Limitations for Batteries 13-15 Hot Car

POLLUTANT**	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
SO_2	11.21	49.10

*A year is defined as any consecutive 12-month period
**These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

Id. at Condition V.D.1.(i).

TABLE V-F-1 Emission Limitations for Battery 19 & 20 PEC System Baghouse (Each PEC)

POLLUTANT***	GR/DSCF	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	0.010	1.67	7.18
PM_{10}	0.010	1.67	7.18
SO_2**		7.78	34.08
NO_X		4.29	18.78
CO		8.91	39.04
VOC		0.18	0.79

*A year is defined as any consecutive 12-month period.
**SO_2 limits are based on SO_2 SIP IP 0052-I017. The limits are for both PEC baghouses
***NO_X, CO, & VOC include PEC baghouse, PEC battery travel hot car, pre-push and PEC fugitive emissions

Id. at Condition V.F.1.(g).

TABLE V-F-2– SO_2 Emission Limitations for Batteries 19-20 Hot Car

POLLUTANT**	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
SO_2	13.73	60.14

*A year is defined as any consecutive 12-month period
**These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

Id. at Condition V.F.1.(j).

TABLE V-H-1 - Emission Limitations for Battery B PEC System Baghouse

POLLUTANT***	LB/TON-COKE	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	0.040	5.28	23.14
PM_{10}	0.040	5.28	23.14
SO_2**		7.50	32.85
NO_X		5.24	22.96
CO		12.30	53.87
VOC		2.79	12.20

*A year is defined as any consecutive 12-month period.
**SO_2 limit is based on SO_2 SIP IP 0052-4017
*** NO_X, CO, & VOC include pec baghouse, pec battery travel hot car, pre-push and pec fugitive emissions

Id. at Condition V.H.1.(f).

TABLE V-I-3 - Emission Limitations for Battery C PEC System Baghouse

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)[1]
Particulate Matter	7.7	33.5
PM_{10}	3.4	14.9
$PM_{2.5}$	1.4	6.1
Nitrogen Oxides	3.6	15.9
Sulfur Oxides*	8.65	37.89
Carbon Monoxide	8.7	38.2
Volatile Organic Compounds	0.3	1.2
Total Reduced Sulfur	0.3	1.3
Benzene	0.04	0.19
Cyanide Compounds	0.09	0.39

[1]A year is defined as any 12 consecutive months.
*SO_2 SIP IP 0052-4017, Condition V.B.1.e

Id. at Condition V.I.1.(jj)

TABLE V-I-4 – SO_2 Emission Limitations for C Battery Hot Car

POLLUTANT**	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
SO_2	5.82	25.49

*A year is defined as any consecutive 12-month period
**These limits are based on ACHD's SO_2 State Implementation Plan (SIP) Permit Revision and USEPA SO_2 Guidance dated September 14, 2017.

Id. at Condition V.I.1.(kk).

The monitoring and testing requirements that the Draft Permit sets for each of these sources do not sufficiently assure compliance with the hourly or annual pollution limitations for any of these pollutants. The Draft Permit does establish rigorous monitoring requirements to control the operation of the baghouses such as requiring the operation of continuous parametric monitoring systems ("CPMS") in accordance with the pushing, quenching, and battery stacks NESHAP, 40 CFR 63 CCCCC, continuous monitoring of the differential pressure drop across each baghouse module, the preparation and use of a written operation and maintenance plan that requires inspections, and the installation and use at all times of a bag leak detection system. *Id.*

at Condition V.D.3.(a), -(f), -(g), -(h), -(i), -(j), and -(k); V.D.3.(a), -(f), -(g), -(h), -(i), -(j), and -(k); Condition V.F.3.(a), -(f), -(g), -(h), -(i), -(j), and -(k); Condition V.H.3.(a), -(f), -(g), -(h), -(i), -(j), and -(k); Condition V.I.3.(b), -(c), -(e), -(f), -(g), and -(h). However, the major flaw with this monitoring of control systems and the baghouse is that baghouses primarily control emissions of PM and not the other pollutants for which hourly and annual limits have been established.

Neither the Draft Permit nor the Review Memo establish nor discuss monitoring that covers emissions, on an hourly basis, of CO, VOC, NOx, SO2, and the other pollutants that are subject to hourly and annual emissions limits from battery C. The Draft Permit does require the permittee to record the number of pushes per day and the amount of coal charged daily for each of the Battery Units excluding C, but it does not explain how this could possibly be a sufficient monitoring requirement to assure compliance with the hourly and annual emissions limits for each applicable pollutant. *Id.* at Condition V.B.3.(b); V.D.3.(b); V.F.3.(b); V.H.3.(b); V.I.3. The Draft Permit includes testing requirements at these sources for PM and visible emissions at least once every 2 years. *Id.* at Condition V.B.2.(a) and (b); V.D.2.(a) and (c); V.F.2.(a) and (c); V.H.2.(a) and (c); V.I.2.(k). The Draft Permit requires testing for SO2 from the Pushing Emission Control Systems excluding batteries 1, 2, 3, and C, once every two years as well. *Id.* at V.D.2.(b); V.F.2.(b); V.F.2.(b). However, again, this does not include testing for every pollutant that is subject to an hourly or annual emission limit. Furthermore, as stated multiple times in other paragraphs in these comments, even annual stack testing alone is insufficient to assure compliance with an hourly limit. *See, e.g., Sierra Club*, 536 F.3d at 676-77; NMWDA Order, at 9. Due to these deficiencies, the Draft Permit fails to establish sufficient monitoring requirements to assure compliance with the hourly and annual emissions limitations at these sources and should be properly revised to include reasonably related monitoring and testing requirements in order to assure compliance with those permit limitations.

Thank you for your consideration of these comments.

Sincerely,

Joseph Otis Minott
Executive Director and Chief Counsel

Christopher D. Ahlers, Staff Attorney
Clean Air Council
135 S. 19th St., Suite 300
Philadelphia, PA 19103
215-567-4004 ext. 116
joe_minott@cleanair.org
cahlers@cleanair.org

Lisa Widawsky Hallowell, Senior Attorney
Philip Sebasco, Staff Attorney
Environmental Integrity Project
1000 Vermont Avenue NW, Suite 1100
Washington, D.C. 20005
akron@environmentalintegrity.org
lhallowell@environmentalintegrity.org
psebasco@environmentalintegrity.org

Angela M. Kilbert, Staff Attorney
PennFuture
200 First Avenue, Suite 200
Pittsburgh, PA 15222
kilbert@pennfuture.org

Zachary Barber, Clean Air Advocate
PennEnvironment Research & Policy Center
1831 Murray Ave, Ste 216
Pittsburgh, PA 15217
zach@pennenvironment.org